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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223 and 226

[Docket No. 110726419-6003-02]

RIN 0648-BB30

**Endangered and Threatened Species; Designation of Critical Habitat for Lower
Columbia River Coho Salmon and Puget Sound Steelhead**

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: We, the National Marine Fisheries Service (NMFS), issue a final rule to designate critical habitat for lower Columbia River coho salmon (*Oncorhynchus kisutch*) and Puget Sound steelhead (*O. mykiss*) pursuant to the Endangered Species Act (ESA). The specific areas designated for lower Columbia River coho include approximately 2,300 mi (3,701 km) of freshwater and estuarine habitat in Oregon and Washington. The specific areas designated for Puget Sound steelhead include approximately 2,031 mi (3,269 km) of freshwater and estuarine habitat in Puget Sound, WA. In developing this final rule we considered public and peer review comments, as well as economic and other relevant impacts. We are excluding a number of particular areas from designation because the benefits of exclusion outweigh the benefits of inclusion, and exclusion will not result in the extinction of the species.

DATES: This final rule becomes effective on *[insert date 30 days after date of publication in the FEDERAL REGISTER]*.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection by appointment, during normal business hours, at the National Marine Fisheries Service, NMFS, Protected Resources Division, 1201 NE Lloyd Blvd., Suite 1100, Portland, OR 97232–1274. The final rule, maps, and other materials relating to these designations can be found on our website at http://www.westcoast.fisheries.noaa.gov/habitat/critical_habitat/critical_habitat_on_the_wc.html.

FOR FURTHER INFORMATION CONTACT: Steve Stone, NMFS, West Coast Region, Protected Resources Division, at the address above or at 503-231-2317; or Maggie Miller, NMFS, Office of Protected Resources, Silver Spring, MD, 301-427-8403.

SUPPLEMENTARY INFORMATION:

Background

We are responsible for determining whether species, subspecies, or distinct population segments (DPSs) are threatened or endangered and which areas of their habitat constitute critical habitat for them under the ESA (16 U.S.C. 1531 *et seq.*). To be considered for listing under the ESA, a group of organisms must constitute a “species,” which is defined in section 3 to include “any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” We have determined that a group of Pacific salmon populations (including lower Columbia River coho) qualifies as a DPS if it is

substantially reproductively isolated and represents an important component in the evolutionary legacy of the biological species (56 FR 58612, November 20, 1991). A group of Pacific steelhead populations qualifies as a DPS if it is markedly separate and significant to its taxon (61 FR 4722, February 7, 1996; 71 FR 834, January 5, 2006). In previous rulemakings, we determined that lower Columbia River coho (70 FR 37160, June 28, 2005) and Puget Sound steelhead (72 FR 26722, May 11, 2007) are each DPSs that warrant protection as threatened species under the ESA. We also determined that critical habitat was not determinable at the time of those final listing decisions and announced that we would designate critical habitat in separate rulemaking.

Since the time of listing, the recovery planning process has progressed for these two DPSs and additional new information is now available to better inform the designation process. In view of these developments, we published an advance notice of proposed rulemaking (ANPR) on January 10, 2011 (76 FR 1392), to make the public aware of the opportunity to provide us with comments and information that may be useful in making proposed critical habitat designations for these two DPSs. We received several comments and datasets in response to the ANPR and these were reviewed and incorporated as appropriate into documents and analyses supporting our proposed rule that was published on January 14, 2013 (78 FR 2726). The specific areas proposed for designation for lower Columbia River coho included approximately 2,300 mi (3,701 km) of freshwater and estuarine habitat in Oregon and Washington. The specific areas proposed for designation for Puget Sound steelhead included approximately 2,031 mi (3,268 km) of freshwater and estuarine habitat in Puget Sound, WA. We proposed to exclude a number of particular areas from designation because the benefits of exclusion

outweighed the benefits of inclusion and we determined that exclusion would not result in the extinction of the DPSs.

The proposed rule (78 FR 2726, January 14, 2013) provided background on the process and rationale we used to identify critical habitat for lower Columbia River coho salmon and Puget Sound steelhead, including: the species' biology and habitat use, the statutory and regulatory aspects of critical habitat designations, and the methods and criteria used to identify critical habitat. More details regarding life history and habitat requirements of lower Columbia River coho and Puget Sound steelhead are found later in this final rule under Species Descriptions and Area Assessments, as well as in the proposed rule, agency status reviews (NMFS, 2001; NMFS, 2005a; NMFS, 2011), and a biological report supporting this rulemaking (NMFS, 2015a).

Summary of Changes from the Proposed Critical Habitat Designation

After considering public comments received and updating the best scientific information available, in this final rule we have made the following changes from the proposed rule: (1) added 74 miles (119 km) of occupied habitat to the critical habitat designation for lower Columbia River coho; (2) removed 82 miles (132 km) of areas incorrectly identified as occupied by lower Columbia River coho in the proposed critical habitat designation; (3) added 101 miles (163 km) of occupied habitat to the critical habitat designation for Puget Sound steelhead; (4) removed 27 (43 km) miles of areas incorrectly identified as occupied by Puget Sound steelhead in the proposed critical habitat designation; (5) designated critical habitat in 85 miles (137 km) of occupied steelhead habitat on the Kitsap Peninsula originally proposed for exclusion; and (6) corrected the erroneous reference to the Puget Sound subbasin in our regulations. These

changes from the proposed rule are discussed further below in the response to comments and summarized for each specific watershed in the range of the DPSs in Tables 1 and 2.

We are also adding regulatory text to update the column labeled “Critical habitat” in the table of threatened species in 50 CFR 223.102(e) to cross-reference this final critical habitat designation for the lower Columbia River coho and Puget Sound steelhead DPSs.

Summary of Comments and Responses

We requested comments on the proposed rule and associated supporting reports to designate critical habitat for lower Columbia River coho and Puget Sound steelhead. The draft biological report and draft economic analysis were also each reviewed by three peer reviewers. We received 22 individual submissions in response to the proposed rule. All of the comments received, including those of two peer reviewers, expressed either general support for designating critical habitat or support for our exclusion of particular areas within the larger designated areas. The comments received and our responses to them are summarized by topic below.

Occupied Areas

Comment 1: Several commenters, including fisheries co-managers, raised issues about the fish distribution data used to identify occupied areas. One commenter believed that we had defined occupied areas too narrowly and, as a result, greatly underestimated the current and historical extent of species distribution. This and other commenters expressed particular concern about the data used to identify areas occupied by Puget Sound steelhead, noting that our maps appeared to be incomplete and that steelhead would be expected to be more widespread than Puget Sound Chinook.

Response: In determining which occupied areas to consider as critical habitat we relied on the statutory definition of critical habitat (ESA section 3(5)(A)) and our regulations at 50 CFR 424.12 and focused on identifying the specific areas within the geographical area occupied by the species, at the time they were listed, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection. As noted in our proposed rule (78 FR 2726, January 14, 2013), our mapping of occupied areas includes stream reaches where the species has been observed (within the past 20 years, but typically more recently) or where it is presumed to occur based on the professional judgment of biologists familiar with the watershed and the availability of suitable habitat, in particular the location of known barriers.

We relied on the best available information regarding species distribution from state, tribal and federal co-managers in Oregon and Washington. In response to comments and new datasets (Oregon Department of Fish and Wildlife [ODFW], 2015; Washington Department of Fish and Wildlife [WDFW], 2015) obtained from these co-managers, we made numerous minor edits to the data and maps supporting the critical habitat designations for lower Columbia River coho and Puget Sound steelhead. Edits included both removing and adding stream reaches to better reflect the areas that warrant designation as critical habitat. For coho we made 107 edits and for steelhead we made 101 edits to stream reaches in our Geographic Information System (GIS) dataset. The majority of edits involved small stream segments less than 0.7 miles (1.1 km) in length. The most substantial edit for coho was to remove approximately 69 stream miles (111 km) above Shipherd Falls in the Wind River watershed because co-managers provided

information leading us to agree and conclude that coho did not use this area historically nor have they been seen in the past 20 years of stream surveys. For steelhead, the most substantial edit was to remove approximately 6 miles (10 km) in the Upper North Fork Nooksack River watershed where co-managers commented that our proposed distribution in Canyon Creek extended beyond the upper extent of steelhead presence. Tables 1 and 2 summarize the edits made for coho and steelhead, respectively, and our final biological report (NMFS, 2015a) provides greater details and maps depicting these edits. Ultimately, the edits resulted in minor refinements to the proposed designation.

We acknowledge that the areas we considered as meeting the ESA definition of “occupied” may not include all areas where fish might be present, especially in the case of steelhead, which are known to penetrate relatively high-gradient stream reaches not commonly used by Chinook and other salmon species (WDFW, 2000). In preparing the proposed rule and this final rule we reviewed (and made modifications based on) the most recent distribution datasets available using a GIS that allowed us to discern whether a stream reach was occupied or not. In many cases, the available data included numerous ‘modeled’ stream reaches that might be occupied by the species based on stream gradient and known barriers to anadromous fish. We considered these modeled reaches to be occupied if the dataset also had supporting annotation indicating that there was a documented field observation that the species was present, or that there was an analysis demonstrating why it was reasonable to conclude the species was present (professional judgment). A substantial number of modeled reaches did not have such annotation. Stream surveys and species mapping efforts are ongoing for these species. As new

information becomes available, we have the ability to revise the critical habitat designations in the future, as appropriate.

Comment 2: One commenter asserted that we must identify sufficient habitat to provide for the essential life cycle needs of the species (foraging, migrating and overwintering areas) and that this may require designating habitat that is not occupied for significant portions of the year, but is ‘essential to the conservation’ of the species.

Response: In our critical habitat assessment we did take into account the life cycles of lower Columbia River coho and Puget Sound steelhead, and our descriptions of essential physical and biological features reflect the habitat needs of coho and steelhead at various life stages. Based on these habitat needs and the best available information regarding species distribution, we identified some areas in nearly all watersheds which are not continuously “occupied,” including freshwater-to-seawater connectivity corridors and reaches with seasonal, side channel habitats important for overwintering juveniles. Additionally, we also proposed for designation as critical habitat for Puget Sound steelhead areas in the upper Elwha River that were unoccupied at the time of listing but deemed essential for the species’ conservation (NMFS, 2015a). The areas proposed for designation—now informed by public comments—reflect the best available information regarding the areas and features qualifying as critical habitat for each species.

Comment 3: Several commenters presented comments and data regarding specific locations where they believed that adjustments were warranted to our mapping of species’ distribution.

Response: We considered the comments and data and, in addition to our responses above, we have summarized the resulting adjustments (mostly relatively minor mapping edits) to particular streams/locations in the Tables 1 and 2.

Critical Habitat Analytical Review Team (CHART) Report and Watershed Ratings

Comment 4: Several comments addressed the CHART process for rating watersheds and how that process impacts whether or not a watershed might be included as critical habitat. One peer reviewer commended the Puget Sound CHART work and believed that the assessment identified uncertainties and distinguished facts from professional judgments. One commenter, focusing on Puget Sound steelhead, expressed concern that the CHART ratings of watershed conservation values were too reliant on our 2005 critical habitat designation for Puget Sound Chinook. A second peer reviewer focused on the lower Columbia River coho evolutionarily significant unit (ESU) and commented that, for the most part, the draft designations rely on extensive, current and robust science to propose many important protections that will be critical for protecting and recovering threatened populations in this ESU. One commenter noted that while the CHART report provided substantial information, the process used to translate CHART watershed scores into ratings of watershed conservation values was not always clear. This commenter was concerned specifically about the low ratings given to the Sammamish and Lake Washington watersheds and their resultant exclusion due to economic impacts.

Response: The CHART process supporting these critical habitat designations relied on the professional judgement of 16 NMFS biologists with considerable species and habitat expertise reviewing the best available scientific information. That process, described in detail in the CHART report (NMFS, 2015a), involved multiple review

phases that culminated in assigning conservation value ratings of “high”, “medium”, or “low” to each watershed/area. In addition to a phase that involved scoring various parameters for each watershed, the CHART process for assigning watershed ratings also considered additional information about the relationship of each watershed/area to others in the range of the DPS, and information about the population occupying each watershed/area and that population’s relationship to other populations in the DPS. The CHART report includes annotation in tables under a heading “Comments/Other Considerations” for each watershed to aid in understanding the resultant ratings.

The essential physical and biological features used to designate critical habitat for lower Columbia River coho and Puget Sound steelhead are the same as those used for all other west coast salmon and steelhead designations completed since our comprehensive review in 2005 (70 FR 52630, September 2, 2005). Given the broad similarities in life history and habitat requirements shared by different species of salmonids, it is not surprising that many watersheds have similar conservation value ratings. However, the CHART report acknowledges that such ratings can and do differ due to species-specific differences in population structure and habitat utilization. For example, there were a number of cases (15 out of 66 watersheds) where watershed ratings for Puget Sound steelhead differed from ratings made for the same watershed in our 2005 designation for Puget Sound Chinook (70 FR 52630, September 2, 2005). In the case of lower Columbia River coho, an even higher proportion (24 out of 55 watersheds) differed with the watershed ratings made in our 2005 designation for lower Columbia River Chinook.

The CHART report describes the basis for giving three of the four watersheds in the Lake Washington subbasin a low conservation value for Puget Sound steelhead,

namely, significant manmade hydrological changes and development have contributed to generally poor quality habitat features. Also, it is unclear to what degree steelhead utilized tributaries in these three watersheds. In the case of the fourth watershed (Cedar River), the CHART expressed similar concerns but also noted that this watershed has the best and most extensive habitat remaining in the subbasin as well as a substantial resident *O. mykiss* population that may play an important role in steelhead production in Central and South Puget Sound. As a result, the Cedar River watershed was assigned a medium rating for conservation value and, unlike the other low-value watersheds, was not subject to exclusion due to economic impacts.

Comment 5: Shortly after we published the proposed rule, a peer reviewer notified us that they had found errors and omissions to Appendix B of the Puget Sound steelhead assessment in the CHART report, including: an incorrect legend to a map, a missing map, and some information missing from a comment field within a table.

Response: We promptly made the corrections and posted an updated version of the CHART report, 3 days after publication of the proposed rule, available via the internet on our agency ESA critical habitat page. The missing map was also made available to the public at the same time via *Regulations.gov* under the “Supporting Documents” for the proposed rule.

Areas Upstream of Barriers

Several comments addressed our assessment of the conservation value of areas that were unoccupied at the time the species were listed due to dams that have since been removed, specifically Elwha and Glines Canyon dams on the Elwha River (in the range of the Puget Sound steelhead) and Condit Dam on the White Salmon River (in the range

of lower Columbia River coho). Another commenter recommended that we consider designating areas above Cushman Dam on the Skokomish River as critical habitat for Puget Sound steelhead. In contrast, one commenter was concerned about designating critical habitat above natural barriers that historically blocked access for salmon and steelhead. We address comments specific to each area/barrier below.

Comment 6 - Elwha Dams (Elwha River): In our proposed rule, we solicited comments and information regarding historical areas upstream of the Elwha and Glines Canyon dams, which were removed between 2011 and 2014 thereby re-establishing access for Puget Sound steelhead and other anadromous fish to the upper watershed. We received one comment on this solicitation from a peer reviewer (who agreed with our assessment) and distribution data from a co-manager identifying additional habitat areas in the upper Elwha River that have the potential to support steelhead.

Response: Based on the best available information, we conclude that approximately 48 miles of habitat above both dams are essential for the conservation of Puget Sound steelhead and have designated those stream reaches as critical habitat. In doing so, we have also reviewed the data provided by a co-manager and added approximately 2.6 miles (4.2 km; see Table 2) to areas we proposed in the upper Elwha River. Steelhead began re-colonizing the upper Elwha soon after dam removal began (e.g., Mapes, 2012) and the areas we are designating as critical habitat are consistent with those believed to be historically accessible to steelhead (Hard *et al.*, 2015; Myers *et al.*, 2015).

Comment 7 - Condit Dam (White Salmon River): In our proposed rule, we solicited comments and information regarding areas upstream of Condit Dam

(decommissioned in 2011) and whether such areas warrant designation as critical habitat for lower Columbia River coho. Several commenters presented divergent opinions on the matter. One commenter stated that the river downstream of the former Condit Dam is steep and contains little suitable spawning gravel, and the river upstream of the former Condit Dam lacks the required characteristics of the described primary constituent elements (PCEs). This commenter further asserted that the upper White Salmon River basin is not presently occupied by coho and historically contained only a small population of coho given the terrain and the lack of PCEs. Another commenter also asserted that PCEs for coho were of poor quality in the White Salmon River and that it will be decades before the migratory corridor meets the PCE conditions of submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival. One commenter noted that most of the lower 12 miles (19 km) of the White Salmon River is subject to elevated levels of protection under either the Management Plan for the Columbia River Gorge National Scenic Area or the Lower White Salmon National Wild and Scenic River Management Plan. This protection, along with other arguments, led the commenter to conclude that critical habitat should not be designated in the White Salmon River watershed. In contrast, four commenters recommended designating critical habitat in the upper portions of the White Salmon River watershed now that Condit Dam has been removed. One commenter noted that fish distribution modeling by the Washington Department of Fish and Wildlife indicates that coho could make extensive usage of this watershed. Another commenter stated that NMFS should place particular weight on the fact that a major reason for the dam's removal was because of the negative impact the

dam had on native fish. The other two commenters recommended designating critical habitat in the upper portions of the watershed but did not provide any new information that was not already considered by the CHART.

Response: In our proposed rule, we noted the CHART's assessment that access to habitat above the Condit Dam site that was unoccupied at the time of listing would likely provide a benefit to lower Columbia River coho, but it was unclear whether such habitat is essential for conservation of the entire DPS. None of the information received during the public comment period changes this conclusion and, therefore, we maintain that areas occupied by lower Columbia River coho at the time of listing (below the Condit Dam site) warrant designation as critical habitat whereas unoccupied areas upstream do not. The 2013 ESA Recovery Plan for the White Salmon River (NMFS, 2013) describes the historical White Salmon coho population as extinct or nearly so and that the preferred approach for species reintroduction is to allow natural straying into the river. That plan goes on to recommend monitoring natural escapement and production and the possibility for hatchery alternatives if population recovery is determined to be too slow. We will monitor any new information and consider it, as appropriate, in any future revision to this designation

Comment 8 - Cushman Dam (Skokomish River): Two commenters, including a peer reviewer, advocated for the designation of critical habitat in the North Fork Skokomish River above the Cushman Dam. Two commenters believed that critical habitat in the North Fork of the Skokomish River should be extended into the upper basin to include all accessible areas above Cushman Dam (including Big Creek). One of these

commenters asserted that the potential increased steelhead production from the upper basin will be essential for recovery of the population.

Response: Areas above Cushman Dam were inaccessible and unoccupied by Puget Sound steelhead at the time of listing. The CHART reviewed information about the Skokomish watershed and rated it of high conservation value noting extensive PCEs and the largest intact estuary in Hood Canal (NMFS, 2015a). In a recent assessment of viability criteria for Puget Sound steelhead (Hard *et al.*, 2015) several Team members noted that there has been considerable debate as to whether winter-run steelhead historically had access beyond the series of falls in the lower North Fork Skokomish River below the dam. Also, most of the habitat above the dam with high intrinsic potential for steelhead remains inundated by Lake Cushman (Hard *et al.*, 2015). As a result of a 2009 settlement between the Skokomish tribe and Tacoma Public Utilities, the latter agreed to install fish passage facilities on the North Fork Skokomish River to reestablish access for anadromous fish into the upper watershed. In contrast to areas in the upper Elwha River, which are now readily accessible to steelhead, steelhead access to stream reaches above Cushman Dam will rely on recently developed trap and haul methods. In our 2010 ESA biological opinion for the Cushman Hydroelectric Project (NMFS, 2010) we noted that allowing steelhead access to areas upstream will enhance the species' spatial structure and diversity characteristics. We also noted that juvenile passage through storage reservoirs like Cushman, which have no measurable river current in much of their length, is a developing technology. This technology has only recently been implemented (Tacoma Power, 2014 and 2015) and it will be some time before we can discern the effects on steelhead production in the basin. For these reasons, we

conclude that it is unclear whether areas above Cushman Dam are essential to the conservation of Puget Sound steelhead but we will revisit this issue if recovery planning indicates otherwise.

Comment 9 - Waterfalls: One commenter recommended that we exclude occupied areas we proposed as critical habitat upstream of three waterfalls in the range of Puget Sound steelhead that historically prevented steelhead passage but access was made possible via fish ladders or trap-and-haul operations. The specific sites are Tumwater Falls on the Deschutes River, Granite Falls on the South Fork Stillaguamish, and Sunset Falls on the South Fork Skykomish River.

Response: We disagree with this recommendation. Although these areas were blocked historically, the implementation of fish ladders and trap and haul operations in the 1950s resulted in Puget Sound steelhead occupying the blocked areas at the time we listed the DPS. Although the recent Technical Recovery Team (TRT) report (Myers *et al.*, 2015) does not identify historical demographically independent populations in these blocked areas, the areas were occupied by steelhead at the time of listing and contain the essential features. We acknowledge that in some of the areas noted by the commenter it is possible that many of the steelhead present are not considered to be part of the DPS (e.g., non-native Skamania Hatchery steelhead above Granite Falls). However, with access to steelhead now established, it is not possible to rule out the presence of some ESA-listed fish in these areas and GIS data we reviewed identified steelhead in these areas (NMFS, 2015a). We conclude that the areas identified in this comment warrant designation as critical habitat (but also note that numerous river reaches in these areas are excluded due to their overlap with lands covered by Habitat Conservation Plans; see Table 2).

Lateral Extent of Critical Habitat

Comment 10: Several commenters expressed opinions about our approach of defining critical habitat as the width of the stream channel defined by the ordinary high-water line or bankfull width. Those opinions generally consisted of concerns that such an approach ignored the importance of adjacent riparian areas and floodplains. For example, one peer reviewer stated: “[m]any of the PCEs identified for steelhead depend on watersheds as a whole (including, for example, riparian habitat, upslope habitats, unoccupied tributaries) and not just the stream reaches that steelhead physically occupy. Consequently, it may be difficult or impossible to conserve steelhead by limiting critical habitat designation only to the wetted stream reaches that they physically use. For example, there is an abundance of scientific information supporting that adjacent riparian zones are integrally tied to the instream habitats. In my mind, this supports the designation of, for example, a riparian zone as critical habitat for steelhead. It is unclear whether or how this is taken into account by NMFS in the designation of critical habitat if the purpose is to truly conserve steelhead.” Another peer reviewer expressed similar concerns and stated that: “[t]he justification for excluding riparian and floodplain areas from critical habitat is unsupported by the analysis in the designation” and noted that many approaches have been developed for defining riparian zones of influence and that using metrics like ordinary high water or bankfull width comes with its own set of ambiguities and difficulties.

Response: In the section *Lateral Extent of Critical Habitat* we describe our past and current approaches to this issue. We acknowledge that the quality of aquatic habitat within stream channels is intrinsically related to the adjacent riparian zones and

floodplain, surrounding wetlands and uplands, and non-fish-bearing streams above occupied stream reaches. However, we maintain that it is reasonable to assert that: (1) stream channels designated up to “ordinary” high water can reasonably be expected to be regularly “occupied” as that term is defined in the ESA, (2) the high water/bankfull elevation can be readily discerned for a variety of stream reaches and stream types using recognizable water lines or vegetation boundaries, and (3) there is no evidence to suggest that limiting our critical habitat designations to ordinary high water or bankfull width has compromised the conservation of listed species. Human activities that occur outside the stream or designated critical habitat can modify or destroy physical and biological features of the stream, and federal agencies are well aware of their need to consult with us on such activities even if they are located upslope or upstream of stream reaches designated as critical habitat.

Marine Areas

Comment 11: Several commenters expressed concern about the lack of marine habitat in our critical habitat designations for these species, in particular marine waters of the Salish Sea. Some commenters noted that while we had identified prey species, such as forage fish in nearshore and offshore areas, among the primary constituent elements of critical habitat, we did not propose such areas. One of these commenters suggested that we follow the approach used in our 2012 leatherback sea turtle critical habitat designation (77 FR 4170, January 26, 2012) that relied on the prey species PCE to designate over 40,000 square miles of critical habitat in the Pacific Ocean. Another commenter and a peer reviewer asserted that survival in the marine waters of Puget Sound is a major

bottleneck for Puget Sound steelhead and that marine habitat may be one of the key factors limiting steelhead production.

Response: As noted in our proposed rule and in some of the comments, we have identified PCEs for salmon and steelhead associated with nearshore and offshore marine waters, and acknowledged that some may require special management considerations or protection (e.g., commercially harvested prey species). However, none of the comments provide information that would allow us to identify specific areas for either species in the nearshore or offshore marine environments. In the case of leatherback critical habitat raised by one commenter, we note that it was possible to identify eight specific marine areas based on observed densities of a prey PCE (scyphomedusae, i.e. “jellyfish”) and leatherback use. In that rule, we also underscored that the specific areas could be assessed based on “the importance of density of prey species as a characteristic of the PCE due to differences in dense aggregations of prey species and predicted use by leatherbacks for sustained foraging.” We presently lack comparable information for lower Columbia River coho and Puget Sound steelhead and commenters have not provided any information to address this deficiency. Therefore, given the best available information, we cannot identify specific marine areas within the geographical area occupied on which are found those physical or biological features essential to their conservation and which may require special management considerations or protection (see sections *Geographical Area Occupied by the Species and Specific Areas within the Geographical Area* and *Nearshore Marine Areas of Puget Sound*).

Activities Affecting Critical Habitat

Comment 12: One commenter asserted that to comply with the requirements of ESA section 4(b)(8) we must describe and evaluate the activities that may adversely modify critical habitat, including the PCE of prey items in nearshore and offshore habitat. The commenter noted that in their review of recent ESA consultations over effects on Puget Sound Chinook and Hood Canal summer-run chum on forage fish and critical habitat, at least two federal agencies (U.S Coast Guard and U.S. Navy) are not included in the current list of federal agencies.

Response: Section 4(b)(8) of the ESA states that “The publication in the **Federal Register** of any proposed or final regulation which is necessary or appropriate to carry out the purposes of this Act shall include a summary by the Secretary of the data on which such regulation is based and shall show the relationship of such data to such regulation; and if such regulation designates or revises critical habitat, such summary shall, to the maximum extent practicable, also include a brief description and evaluation of those activities (whether public or private) which, in the opinion of the Secretary, if undertaken may adversely modify such habitat, or may be affected by such designation.” In response to this comment, we have updated the section **Activities That May be Affected by Critical Habitat Designation** to reflect our recent history of ESA section 7 consultations in the range of lower Columbia coho and Puget Sound steelhead (including adding the U.S. Coast Guard and U.S. Department of Defense to the list of federal agencies). Also, the CHART report supporting these designations references the report “An Ecosystem Approach to Salmonid Conservation” by Spence *et al.* (1996) and describes how that report helped the CHART evaluate and summarize—for each watershed—over a dozen activities that affect the essential habitat features supporting

these critical habitat designations. Although forage fish/species harvest was evaluated by the CHARTs as a potential habitat-modifying activity, it was not identified as a management concern in any of the watersheds assessed. It is possible that such harvest may be a management consideration in some marine areas; however, we have not identified any marine areas as critical habitat in this rulemaking.

Economic Analysis

Comment 13: One commenter disagreed with our analysis of the economic impacts of designating critical habitat in our use of the ‘baseline’ approach to its consideration of economic impacts. The commenter stated that in attributing essentially all of the regulatory burdens and economic costs arising under the ESA to the listing decision, we had rejected the law as established in the Tenth Circuit (*New Mexico Cattle Growers Ass’n v. U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001) (baseline approach is unlawful) and accepted the law as it stands in the Ninth Circuit (*Arizona Cattlegrowers’ Ass’n v. Salazar*, 606 F.3d 1160, 1172–74 (9th Cir. 2010), cert. denied, 131 S. Ct. 1471, 179 L. Ed. 2d 300 (2011) (baseline approach is lawful). The commenter asserted that we have no authority to resolve circuit court splits involving matters of statutory interpretation and construction, and that by using the baseline approach our critical habitat designation fails to account for all the economic impacts and is contrary to the ESA and congressional intent.

Response: As described in our proposed rule, in this and recent critical habitat designations our economic analysis has focused on determining the impacts on land uses and activities from the designation of critical habitat that are above and beyond—or incremental to—those “baseline” impacts due to existing or planned conservation efforts

being undertaken due to other federal, state, and local regulations or guidelines. This approach is consistent with the more recent Ninth Circuit court case noted in the comment, and these critical habitat designations are located within the areas administered by that Circuit. Moreover, it is consistent with our critical habitat regulations at 50 CFR 424.19 (78 FR 53058, August 28, 2013).

Indian Lands

Comment 14: Three commenters expressed their support for Indian lands being excluded from critical habitat designation. One tribal commenter noted that Indian lands of the Muckleshoot Indian Tribe should have been identified for exclusion in the Middle Green River watershed (HUC 1711001302) and in the Lower Green River watershed (HUC 1711001303) (NMFS 2015a).

Response: We reviewed information regarding the lands of the Muckleshoot Indian Tribe and have made the appropriate ministerial corrections in this rulemaking (see Table 6).

Habitat Conservation Plans (HCPs)

Comment 15: Several commenters submitted comments regarding the exclusion of HCPs from designated critical habitat. Three commenters agreed with our proposed exclusion of lands subject to HCPs. One of these commented that the HCP for the Washington Forest Practices Act Forest and Fish Rules should be excluded from critical habitat designation to eliminate disincentives created by regulatory burdens of critical habitat, and instead rely upon the existing protective measures. Two other commenters believed that we had made appropriate use of the exclusion process mandated by the ESA and noted that HCPs provide effective long-term special management protection for

salmon and steelhead habitat. Three other commenters disagreed with our exclusion of HCPs from critical habitat designation. One commenter asserted that we had expressed unjustified concern that designating critical habitat will cause private and state landowners to not enter into HCPs. They also believed that HCPs have considerably different protections and goals than critical habitat designation and that is arbitrary for us to argue that the two ESA mechanisms are essentially interchangeable. A second commenter opposed any exclusions from critical habitat designation of areas that may be covered by other management plans or HCPs under the logic that they do not need “special management” as used in section 3(5)(A) (citing *Center for Biological Diversity v. Norton*, 240 F. Supp. 2d 1090, 1099 (D. Az. 2003)) or using the rationale that the benefits of exclusion outweigh the benefits of designation under Section 4(b)(2) (citing *Natural Res. Def. Council v. Interior*, 113 F.3d 1121, 1127 (9th Cir. 1997)). A third commenter (the Suquamish Tribe) requested that we re-evaluate our exclusion of Puget Sound steelhead habitat on the Kitsap Peninsula subject to the Washington Forest Practices HCP. This commenter asserted that these HCP lands are difficult to identify, the HCP has had high non-compliance rates for riparian harvests, the HCP only addresses a limited number of activities, and exclusion would result in less protection for non-forestry land uses.

Response: In our proposed rule, we described our process for evaluating the benefits of designation and exclusion for lands covered by approved HCPs—including consideration of landowners’ views about exclusion—and our determination that excluding such lands will not result in extinction of lower Columbia River coho and Puget Sound steelhead. The affected HCPs and landowners (or regulators) in this

rulemaking are: Washington Department of Natural Resources (as landowner in the West of Cascades HCP and as regulator in the Washington Forest Practices HCP); Green Diamond Resources Company; West Fork Timber Company; City of Kent, Washington; and J.L. Storedahl and Sons. In this final rule we have maintained the exclusions of these lands, except in the case of the Washington Forest Practices HCP where we are not excluding a subset of HCP lands on the Kitsap Peninsula (described below). As noted in this final rule and a supporting ESA section 4(b)(2) analysis (NMFS 2015c), we conclude that a benefit of excluding HCP-covered lands from designation is the furtherance of our ongoing relationship with these landowners, which will result in improved implementation and improved conservation for the species. In addition, exclusion of these lands provides an incentive for other landowners to seek HCPs, which also provides a conservation benefit to the species. While it may be true, as one commenter asserted, that designation of HCP land as critical habitat could discourage landowners from entering into HCPs, we did not include that possibility in our balancing under Section 4(b)(2). In other words, we did not count avoidance of that possibility as a “benefit of exclusion.”

Regarding the comments citing court cases relating to ESA sections 3 and 4, we note that our exclusion of HCP lands was based on the provisions of ESA section 4(b)(2)—balancing the benefits of designation versus exclusion—and not on a determination under section 3(5)(A) that such lands do not need “special management” and do not meet the definition of critical habitat under the ESA. Our 4(b)(2) report, made available for public comment, explains the lengthy analysis we undertook to evaluate whether to exclude the specific HCP lands identified above. That analysis included:

contacting each HCP landowner or regulator and soliciting their preferences and concerns; rating the conservation value of watersheds that overlap the HCP; assessing the types of federal activities in those watersheds that would likely undergo section 7 consultation; analyzing the particular HCP areas subject to exclusion in a GIS; balancing the benefits of designating HCP lands against the benefits of excluding them (while ensuring that any exclusions will not result in the extinction of the species); reviewing public input on our proposal and modifying our approach as necessary; and documenting our rationale and final assessment (NMFS 2015c). Section 4(b)(2) of the ESA grants the Secretary discretion to exclude any area from critical habitat designation if he determines “the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat” and exclusion will not result in extinction of the species. In adopting this provision, Congress explained that “[t]he consideration and weight given to any particular impact is completely within the Secretary’s discretion.” (H.R. No.95-1625, at 16-17, 1978; see also agency regulations at 50 CFR 424.19). The Secretary’s discretion to exclude is limited, as he may not exclude areas that “will result in the extinction of the species.” We have discretion in whether and how we balance benefits. Although the statute does not require that any area be excluded, consistent with our approach in prior critical habitat designations for most salmon and steelhead DPSs, we have determined that the benefit of excluding the lands covered by these HCPs outweighs the benefit of designating them and have exercised our discretion to exclude them from critical habitat designation.

Based on comments from the Suquamish Tribe, we re-assessed our proposed exclusion of stream reaches occupied by Puget Sound steelhead on the Kitsap Peninsula

that are subject to the Forest Practices HCP. Although this extensive HCP includes numerous other watersheds occupied by Puget Sound steelhead (and lower Columbia River coho) we focused our re-assessment on the Kitsap where we had site-specific concerns, such as those raised by the Tribe. As a result of that re-assessment we considered the following:

- Information from the Suquamish Tribe noting strong concerns about this HCP and about Kitsap steelhead and streams within the Tribe's usual and accustomed fishing places, including concerns about the difficulty in accurately delineating HCP areas, activities not covered by the HCP, conversion of lands out of forestland, and non-compliance rates for riparian harvests;

- Recently updated GIS data from the Washington Department of Natural Resources depicting those lands that are 'approved' (have authority to operate) or 'renewed' (the authority to operate has been extended beyond the original expiration date) under the HCP and its associated incidental take permit. The data posted and analyzed in September 2015 (Washington Department of Natural Resources, 2015) indicate that these approved or renewed lands overlap with approximately 3 miles (5 km) of Kitsap steelhead streams. While Kitsap lands covered by the Forest Practices HCP in the range of Puget Sound steelhead encompass approximately 90 miles (145 km) of steelhead streams, only a small fraction of those lands are currently enrolled and subject to the incidental take permit approved by NMFS for the Forest Practices HCP.

- Except for a few streams adjacent to Hood Canal occupied by threatened chum salmon, most Kitsap streams are not designated ESA critical habitat for other species.

- Information on the future of Washington’s forests and forest industries prepared by the University of Washington College of Forest Resources (2009) projects that high-value forest lands on the Kitsap Peninsula are at high risk of being converted from forest use to development (conversion), especially in the northern and eastern parts of the peninsula. Once converted, such lands would no longer qualify for coverage under the HCP.

Based on our reconsideration, we concluded that the benefits of exclusion do not outweigh the benefits of designation for these lands covered by the HCP, primarily because there are no overlapping salmonid critical habitat designations in these areas and there is a high likelihood these areas will be converted (NMFS 2015c), and also because exclusion would undermine our ongoing relationship with the Suquamish Tribe which is an important conservation partner. We therefore have revised our designation to exclude only those Forest Practices HCP areas on the Kitsap Peninsula that the Washington Department of Natural Resources has classified as being in an approved or renewed enrollment status at the time of this final rule.

Comment 16: One commenter requested that we exclude their private lands (SDS Company, Stevenson Land Company and Broughton Lumber Company) on the White Salmon River and Little White Salmon River because the benefits of their Safe Harbor Agreement outweigh the benefits of critical habitat designation for lower Columbia River coho.

Response: We reviewed the maps submitted by this commenter and determined that none of the private lands referenced overlap with areas considered for critical habitat designation.

Climate Change

Comment 17: One commenter believed that we should more thoroughly consider and address the uncertainties of future climate effects on Puget Sound steelhead habitat, in particular the spatial coverage of critical habitat, as well as uncertainties of how steelhead populations might utilize habitat in the future. This commenter also noted that the Puget Sound TRT is actively developing information on population structure and viability for Puget Sound steelhead (e.g., Myers *et al.*, 2015; Hard *et al.*, 2015) and recommended that our critical habitat designation be modified as new information becomes available.

Response: We agree that climate-related changes are likely to affect essential habitat features and the distribution of Puget Sound steelhead (and other salmonids). However, our current state of knowledge provides only general guidance regarding how such changes would influence the specific areas we consider in a critical habitat designation. For example, a recent paper by Wade *et al.* (2015) models steelhead vulnerability to climate change and projects that in the west Cascade region, particularly Puget Sound, extreme high flows will impair conditions for steelhead incubation and migration life stages. However, they, in turn, caution that their methods were applied at a coarse resolution and that their results should be interpreted accordingly. Similarly, a recent report on climate change in Puget Sound (Climate Impacts Group, 2015) project that, over the long term, increasing peak flows, decreasing summer low flows, and warming stream temperatures will negatively affect steelhead and other stream-rearing species. That report underscores that cold-water refugia within rivers will be critical in helping salmonid populations adapt to future climate conditions. Such information would

be useful at the scale that we analyze critical habitat; however, comprehensive inventories of refugia have not been completed and remain an important information gap (e.g., National Wildlife Federation, 2009; Raymond *et al.*, 2014). Regardless, areas analyzed in our critical habitat designation for Puget Sound steelhead included higher elevation habitats that will likely continue to be important cold-water sources for steelhead and other species in the future.

In the present critical habitat designations, we have used the best available information—including TRT analyses of Puget Sound steelhead population structure (Myers *et al.*, 2015) and viability criteria (Hard *et al.*, 2015)—to discern areas that are eligible for designation and to assess their conservation value. While useful at the scale of populations and watersheds, these documents do not provide specific guidance on how to account for climate change impacts when designating particular stream reaches as critical habitat for steelhead. The viability analysis by Hard *et al.* (2015) is intended to serve as a technical framework for subsequent recovery planning (currently underway) but cautions that it is not intended to establish targets for delisting or recovery of steelhead, nor explicitly identify specific populations or groups of populations for recovery priority. The analysis does underscore the importance of maintaining steelhead life history diversity (e.g., both summer- and winter-run types) and spatial distribution in stream reaches across populations, but, again, does not provide specific information on areas that warrant designation as critical habitat now or in the future. The report does include maps of steelhead spawning reaches and analyses of stream reaches with varying levels of intrinsic potential (i.e., a measure of habitat suitability) for steelhead production. We reviewed these maps and data and found that nearly all (99.5 percent) of the stream

reaches Hard *et al.* (2015) classified as known spawning or rearing reaches with high intrinsic potential were already in the GIS data and maps we analyzed for designation as critical habitat. Also, the stream reaches we analyzed encompassed all Puget Sound steelhead populations identified by Hard *et al.* (2015) and our assessment of watershed conservation value (as well as unoccupied reaches of the upper Elwha River) specifically took into account the importance of the less common summer-run steelhead life history type (NMFS, 2015a).

In our 2011 status review update for ESA-listed salmon and steelhead in the Pacific Northwest (Ford, 2011), we observed that climate change is likely to play an increasingly important role in determining the abundance of ESA-listed fish and the conservation value of designated critical habitats. We went on to note that some habitats currently occupied by salmon and steelhead may become uninhabitable due to the cumulative effects of climate change, and species may exhibit elevational and latitudinal shifts in distribution (Ford, 2011). Changes in the habitat areas and essential features considered in our critical habitat designation will likely be driven by factors such as higher water temperatures, reduced flows in summer and fall, and increased flooding in the winter. For example, increased high flows and flooding could impair the essential features related to freshwater spawning and rearing sites by reducing suitable overwintering habitat as well as scouring redds and reducing egg survival.

While the overall impacts of climate change on salmon and steelhead are expected to be negative, the magnitude of effects is likely to vary considerably. For example, Ford (2011) notes that climate-related changes will vary across the landscape, and areas with elevations high enough to maintain temperatures well below freezing for most of the

winter and early spring will be less affected, while low-elevation areas are likely to be more affected. Similarly, the Lower Columbia River Salmon and Steelhead ESA Recovery Plan (NMFS, 2013) acknowledges that the magnitude and timing of changes to species' distribution, behavior, growth, and survival are poorly understood and specific effects are likely to vary among populations and goes on to identify various 'adaptation strategies' to reduce impacts of climate change. With respect to the comment being addressed here, several strategies of note from the plan include: (1) Conserving adequate habitat to support healthy fish populations and ecosystem functions in a changing climate; (2) Developing a methodology to assess and identify, and then protect, stream reaches and population strongholds that will be resilient/resistant to climate change impacts; and (3) Protecting and restoring headwater rivers and streams to protect the sources of cool, clean water and normative hydrologic conditions.

We believe that our approach to making critical habitat designations for Puget Sound steelhead (as well as lower Columbia River coho) is consistent with such strategies. With respect to the first strategy, we note that we excluded (based on economic impacts) very few occupied stream reaches that met the ESA definition for critical habitat. The vast majority of exclusions we made involved areas covered by HCPs which are expected to promote recovery through land and water management practices that benefit salmonids and encourage voluntary conservation agreements on non-federal lands. For the second strategy, our analysis of critical habitat employed a methodology involving a team of steelhead and habitat experts charged with reviewing and rating the conservation value of habitat areas in every watershed supporting Puget Sound steelhead (NMFS, 2015a). Most of the watersheds we evaluated were assigned a high conservation

value by the CHARTs and, in light of the third strategy, many of these watersheds (especially along the Cascade Range) included headwater stream habitats at higher elevations such as those that Ford (2011) suggest will be less affected by climate change.

We will continue to monitor climate change information relevant to Puget Sound steelhead as well as guidance from ongoing recovery planning for this species. Consistent with this commenter's view, if new information suggests that the specific areas we have designated as critical habitat warrant reconsideration, or that additional areas should be considered for designation, we will do so as appropriate.

Information Quality Act

Comment 18: One commenter stated that proposed rule and the documents supporting it do not meet the requirements of the Information Quality Act (IQA). They contend that since two of the documents that the critical habitat proposals rely on (the economic analysis and the CHART report) were not subject to prior review then the IQA pre-dissemination review was incomplete. Further, they commented that the IQA requires that we disclose our sources of information but allege that our documents were missing such sources and citations, in particular information regarding freshwater areas occupied by lower Columbia River coho.

Response: In our proposed rule section on "Information Quality Act and Peer Review" we stated that "[t]he data and analyses supporting this proposed action have undergone a pre-dissemination review and have been determined to be in compliance with applicable information quality guidelines implementing the Information Quality Act (IQA) (Section 515 of Pub. L. 106-554)." That determination is an internal, agency review that was made on November 5, 2012, prior to publishing the proposed rule.

Guidance on making that determination can be found in the NMFS “Section 515 Pre-dissemination Review and Documentation Guidelines” located at the NOAA Chief Information Officer website

(http://www.cio.noaa.gov/services_programs/info_quality.html). Later, in that same section of the proposed rule, we noted that the two documents cited by the commenter would be distributed for independent peer review and that we would address any comments received in developing the final drafts of the two reports. We distributed those documents to six peer reviewers (two of which provided comments) and have taken into account those comments in developing this final rule.

With respect to our source and citation for information regarding lower Columbia River coho, the draft CHART report stated that “...we developed extensive information regarding the stream reaches occupied by lower Columbia River coho and Puget Sound steelhead using data compiled by state and tribal fisheries agencies in Oregon and Washington, as the best available information. We collected and verified these data and produced distribution maps at a scale of 1:24,000 using standard Geographic Information System (GIS) software. We accessed these GIS data beginning in 2010, modified them based on input from state and tribal fishery biologists, and believe that they represent the best available information about areas occupied by each species at the time of listing. We also developed latitude-longitude identifiers for the end-points of each occupied stream reach.” This text should have included reference to the ODFW and WDFW GIS datasets that were included in the report’s References section and cited elsewhere in the CHART report. We have edited that report to include the appropriate citations for these datasets

and we will make those GIS data available via the internet on our agency ESA critical habitat page.

Statutory and Regulatory Background for Critical Habitat Designations

The ESA defines critical habitat under section 3(5)(A) as: “(i) the specific areas within the geographical area occupied by the species, at the time it is listed . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed . . . upon a determination by the Secretary [of Commerce] that such areas are essential for the conservation of the species.” The ESA does not specifically define the phrase “physical or biological features.” As noted in our proposed rule, agency regulations at 50 CFR 424.12(b) direct us to focus on these features, as well as the principal biological or physical constituent elements that are essential to the conservation of the species. In our CHART report (NMFS, 2015a) and proposed rule (78 FR 2726, January 14, 2013), we referred to the features and sites relevant to this definition as “PCEs.” In this final rule, we use the terms “PCEs” and “essential features” interchangeably and emphasize that these two terms are equivalent for this rulemaking.

Section 4(a)(3) of the ESA precludes the Secretary from designating military lands as critical habitat if those lands are subject to an Integrated Natural Resource Management Plan (INRMP) under the Sikes Act that the Secretary certifies in writing benefits the listed species. As described in the section *Military Lands* we have identified three areas with qualifying INRMPs in the range of Puget Sound steelhead.

Section 4(b)(2) of the ESA requires us to designate critical habitat for threatened and endangered species “on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat.” This section grants the Secretary of Commerce (Secretary) discretion to exclude any area from critical habitat if he determines “the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat.” In adopting this provision, Congress explained that, [t]he consideration and weight given to any particular impact is completely within the Secretary’s discretion.” H.R. No.95-1625, at 16-17 (1978). The Secretary’s discretion to exclude is limited, as he may not exclude areas that “will result in the extinction of the species.” We describe that process and the results below in the section Application of ESA Section 4(b)(2).

Once critical habitat is designated, section 7 of the ESA requires federal agencies to ensure they do not fund, authorize, or carry out any actions that will destroy or adversely modify that habitat. This requirement is in addition to the section 7 requirement that federal agencies ensure their actions do not jeopardize the continued existence of listed species. We identify potentially affected federal agencies and actions in the section **Activities That May be Affected by Critical Habitat Designation.**

Methods and Criteria Used To Identify Critical Habitat

In the following subsections, we describe the relevant definitions and requirements in the ESA and our implementing regulations, and the key methods and criteria used to prepare this critical habitat designation. Discussion of the specific implementation of each item occurs within the species-specific sections. In accordance

with section 4(b)(2) of the ESA and our implementing regulations (50 CFR 424.12), this final rule is based on the best scientific information available concerning the species' present and historical range, habitat, and biology, as well as threats to their habitat. In preparing this rule, we reviewed and summarized current information on these species, including recent biological surveys and reports, peer-reviewed literature, NMFS status reviews, comments on our proposed rule, and the proposed and final rules to list these species. All of the information gathered to create this final rule has been collated and analyzed in three supporting documents: a Final Biological Report (NMFS, 2015a); a Final Economic Analysis (NMFS, 2015b); and a Final Section 4(b)(2) Report (NMFS, 2015c). We used this information to inform the identification of specific areas as critical habitat. We followed a five-step process in order to identify these specific areas: (1) determine the geographical area occupied by the species at the time of listing, (2) identify physical or biological habitat features essential to the conservation of the species (i.e., essential features), (3) delineate specific areas within the geographical area occupied by the species on which are found the essential features, (4) determine whether the features in a specific area may require special management considerations or protections, and (5) determine whether any unoccupied areas are essential for conservation. Our evaluation and conclusions are described in detail in the following sections.

Geographical Area Occupied by the Species and Specific Areas within the Geographical Area

Federal, state, and tribal fishery biologists map salmonid species presence and distribution at the level of stream reaches. The mapping includes areas where the species is present (within the past 20 years, but typically more recently) or where it is presumed

to be present based on the professional judgment of biologists familiar with the watershed and the availability of suitable habitat, in particular the location of known barriers. Much of these data can be accessed and analyzed using GIS to produce consistent and fine-scale maps. As a result, nearly all salmonid freshwater and estuarine habitats in Washington, Oregon, Idaho, and California are mapped and available in GIS (ODFW, 2010a and 2015; WDFW, 2010 and 2015) at a scale of 1:24,000 (e.g., one map inch equals 24,000 inches—2,000 feet—in the real world), allowing for accurate and refined delineation of the “geographical area occupied by the species.” We originally accessed these GIS data beginning in 2010 and modified them based on data available in 2015 and on input from federal, state and tribal fishery biologists and comments on our proposed rule. We believe these data represent the best available information about areas occupied by each species at the time of listing.

To identify “specific areas,” we used “HUC5” watersheds as we did in our 2005 salmonid critical habitat designations (70 FR 52630, September 2, 2005). HUC5 watershed delineations are created by the U.S. Geological Survey and are generally available from various federal agencies and via the internet (Interior Columbia Basin Ecosystem Management Project, 2003; Regional Ecosystem Office, 2004; U.S. Department of Interior and U.S. Geological Survey, 2009). We used this information to organize critical habitat information systematically and at a scale that was relevant to the spatial distribution of salmon and steelhead. Organizing information at this scale is especially relevant to salmonids, since their innate homing ability allows them to return to particular reaches in the specific watersheds where they were born. Such site fidelity results in spatial aggregations of salmonid populations (and their constituent spawning

stocks) that generally correspond to the area encompassed by wider HUC4 subbasins or their constituent HUC5 watersheds (Washington Department of Fisheries, Washington Department of Wildlife and Western Washington Treaty Indian Tribes, 1992; Kostow, 1995; McElhany *et al.*, 2000).

In addition, HUC5 watersheds are consistent with the scale of recovery efforts for West Coast salmon and steelhead, and watershed-level analyses are now common throughout the West Coast. There are presently hundreds of watershed councils or groups in the Pacific Northwest. Many operate at a geographic scale of one to several HUC5 watersheds and are integral parts of larger-scale salmon recovery strategies. In addition to these efforts, we have developed various ESA guidance documents that underscore the link between salmon conservation and the recovery of watershed processes (NMFS, 2000; NMFS, 2005b; NMFS, 2007). Aggregating stream reaches into HUC5 watersheds allowed the agency to delineate “specific areas” within or outside the geographical area occupied by the species at a scale that corresponds well to salmonid population structure and ecological processes.

As in our 2005 critical habitat designations (70 FR 52630, September 2, 2005), we identified estuary features essential to conservation of these species. For streams and rivers that empty into marine areas, we included the associated estuary as part of the HUC5 “specific area.” Also, as in our 2005 salmonid designations, we identified certain prey species in nearshore and offshore marine waters (such as Pacific herring) as essential features, and concluded that some may require special management considerations or protection because they are commercially harvested. However, prey species move or drift great distances throughout marine waters, often in association with

oceanographic features that also move (such as eddies and thermoclines). In our proposed rule, we sought new information to better inform this question; however, we did not receive any new information that was not already considered. As such, we conclude that we cannot identify specific offshore marine areas where the essential features may be found (NMFS, 2012).

We also considered marine areas in Puget Sound for steelhead as potential specific areas that may contain features essential to conservation of these species, but concluded that the best available information suggests there are no areas that meet the statute's definition of critical habitat. In our 2005 rule (70 FR 52630, September 2, 2005), we designated critical habitat in nearshore areas for Puget Sound Chinook and Hood Canal summer-run chum salmon. However, steelhead move rapidly out of freshwater and into offshore marine areas, unlike Puget Sound Chinook and Hood Canal summer chum, making it difficult to identify specific foraging areas where the essential features are found. We therefore determined that for Puget Sound steelhead it is not possible to identify specific areas with essential features in the nearshore zone in Puget Sound.

Physical or Biological Features Essential for Conservation

Agency regulations at 50 CFR 424.12(b) interpret the statutory phrase “physical or biological features essential to the conservation of the species.” The regulations state that these features include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species. The regulations further

direct us to “focus on the principal biological or physical constituent elements... that are essential to the conservation of the species, and specify that these elements shall be the ‘known primary constituent elements’.” The regulations identify primary constituent elements as including, but not being limited to: “roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.” As described earlier, in this final rule we use the terms “essential features” and “PCEs” interchangeably to describe the physical and biological features essential to the conservation of lower Columbia River coho and Puget Sound steelhead.

For the 2005 critical habitat designations for salmon and steelhead (70 FR 52630, September 2, 2005), NMFS biologists developed a list of physical and biological features relevant to determining whether occupied stream reaches within a watershed meet the ESA section (3)(5)(A) definition of “critical habitat,” consistent with the implementing regulation at 50 CFR 424.12(b). Relying on the biology and life history of each species, we determined the physical or biological habitat features essential to their conservation. For the present rulemaking, we used the same features, which we identified in the advance notice of proposed rulemaking (76 FR 1392, January 10, 2011) and proposed rule (78 FR 2726, January 14, 2013). These features include sites essential to support one or more life stages of the DPS (sites for spawning, rearing, migration and foraging). These sites, in turn, contain physical or biological features essential to the conservation of the DPS (for example, spawning gravels, water quality and quantity, side channels, forage species). Specific types of sites and the features associated with them include the following:

1. Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development.
2. Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.
3. Freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.
4. Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.
5. Nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.
6. Offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.

We re-evaluated these essential features and sites (PCEs) and determined that they are all fully applicable to lower Columbia River coho and Puget Sound steelhead. The habitat areas designated in this rule currently contain essential features within the acceptable range of values required to support the biological processes for which the species use the habitat (NMFS, 2015a). The contribution of the essential features to the habitat varies by site and biological function, illustrating that the quality of the elements may vary within a range of acceptable conditions.

Special Management Considerations or Protection

An occupied area cannot be designated as critical habitat unless it contains physical and biological features that “may require special management considerations or protection.” Agency regulations at 50 CFR 424.02 define “special management considerations or protection” to mean “[m]ethods or procedures useful in protecting physical or biological features essential to the conservation of listed species.” Many forms of human activity have the potential to affect the habitat of listed salmon species: (1) forestry; (2) grazing; (3) agriculture; (4) road building/maintenance; (5) channel modifications/diking; (6) urbanization; (7) sand and gravel mining; (8) mineral mining; (9) dams; (10) irrigation impoundments and withdrawals; (11) river, estuary, and ocean traffic; (12) wetland loss/removal; (13) beaver removal; and (14) exotic/invasive species introductions. In addition to these, human harvest of salmonid prey species (e.g., herring, anchovy, and sardines) may present another potential habitat-related activity (Pacific Fishery Management Council, 1999). All of these activities affect essential features via their alteration of one or more of the following: stream hydrology, flow and water-level modifications, fish passage, geomorphology and sediment transport, temperature,

dissolved oxygen, vegetation, soils, nutrients and chemicals, physical habitat structure, and stream/estuarine/marine biota and forage (Spence *et al.*, 1996; Pacific Fishery Management Council, 1999).

Unoccupied Areas

Section 3(5)(A)(ii) of the ESA authorizes the designation of “specific areas outside the geographical area occupied at the time [the species] is listed” if these areas are essential for the conservation of the species. Regulations at 50 CFR 424.12(e) emphasize that the agency “shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species.” We focused our attention on the species’ historical range when considering unoccupied areas since these logically would have been adequate to support the evolution and long-term maintenance of distinct population segments. As with occupied areas, we considered the stream segments within a HUC5 watershed to best describe specific areas. While it is possible to identify which HUC5s represent geographical areas that were historically occupied with a high degree of certainty, this is not always the case with specific stream segments. This is due, in part, to the emphasis on mapping currently occupied habitats and to the paucity of site-specific or systematic historical stream surveys. As described later in this final rule, we did identify unoccupied stream reaches that are essential for conservation of Puget Sound steelhead.

Military Lands

Section 4(a)(3) of the ESA precludes the Secretary from designating military lands as critical habitat if those lands are subject to an INRMP under the Sikes Act that

the Secretary certifies in writing benefits the listed species. We consulted with the U.S. Department of Defense (DOD) and determined that three installations in Washington with either draft or final INRMPs overlap with streams occupied by Puget Sound steelhead: (1) Naval Base Kitsap; (2) Naval Radio Station, Jim Creek; and (3) Joint Base Lewis-McChord (Army and Air Force). We did not identify any INRMPs or DOD installations within the range of lower Columbia River coho.

We identified habitat meeting the statutory definition of critical habitat at each of the above installations and reviewed the INRMPs, as well as other information available regarding the management of these military lands. Our review indicates that each of these INRMPs address Puget Sound steelhead habitat, and all contain measures that provide benefits to this DPS (NMFS, 2015c). Examples of the types of benefits include actions that eliminate fish passage barriers, control erosion, protect riparian zones, increase stream habitat complexity, and monitor listed species and their habitats. As a result, we are not designating critical habitat in areas subject to the INRMPs identified above.

Critical Habitat Analytical Review Team (CHART)

To assist in the designation of critical habitat, we convened two CHARTs (henceforth referred to as “Teams”)—one for lower Columbia River coho and another for Puget Sound steelhead. The Teams consisted of NMFS salmonid habitat biologists who were tasked with assessing biological information pertaining to areas under consideration for designation as critical habitat (NMFS, 2015a). The Teams examined each habitat area within the watershed to determine whether the reaches occupied by the species contain the physical or biological features (PCEs) essential to conservation. The Teams also relied on their experience conducting section 7 consultations to determine whether the

features “may require special management considerations or protection.” The Teams’ rating of habitat areas as having a high, medium, or low conservation value informed our discretionary balancing consideration in ESA section 4(b)(2). The Teams were also tasked with assessing whether there were any unoccupied areas within the historical range of the DPSs that were essential for conservation. Further details on the Team’s methods for determining relative conservation values and ratings of habitat areas can be found in the proposed rule (78 FR 2726, January 14, 2013), and that discussion is incorporated herein by reference.

Species Descriptions and Area Assessments

The proposed rule describes in greater detail the life history traits and conservation status of lower Columbia River coho and Puget Sound steelhead, and the Teams’ assessment of habitat areas. None of the information we received from public comments on the proposed rule affected our consideration of this information for this final rule. As such, the information on these DPSs’ life history traits, conservation status, and habitat assessments remain the same as described in the proposed rule (78 FR 2726, January 14, 2013), and that discussion is incorporated herein by reference. Since publishing our proposed rule, we have monitored recovery planning progress for both DPSs. Notably, several months after proposing critical habitat, we released an ESA recovery plan addressing lower Columbia River coho (78 FR 41911, July 12, 2013; NMFS, 2013), and in 2015 the Puget Sound TRT completed assessments identifying historical populations and viability criteria for Puget Sound steelhead (Myers *et al.*, 2015; Hard *et al.*, 2015). We considered this new information during the development of this final critical habitat designation and determined that, aside from some minor changes to

steelhead population names, it did not change the area assessments and conclusions reached in our proposed critical habitat designation. However, in response to comments on our proposed rule and review by fisheries co-managers in Washington and Oregon, we edited our distribution data/maps for lower Columbia River coho salmon to better reflect the areas occupied at the time of listing. Tables 1 and 2 summarize the changes made for specific watersheds in the range of each DPS, including the removal of areas incorrectly identified as occupied habitat in the proposed rule (referred to as "unoccupied areas" in these tables), while more detailed information is contained in the CHART report (NMFS, 2015a).

TABLE 1. CHANGES TO CRITICAL HABITAT DESIGNATION FOR LOWER COLUMBIA RIVER COHO SALMON.

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
MIDDLE COLUMBIA/ HOOD	1707010506	East Fork Hood River	Added 0.6 miles (1.0 km) of occupied habitat areas in one stream and removed 0.2 miles (0.3 km) of unoccupied areas in one stream.
MIDDLE COLUMBIA/ HOOD	1707010507	West Fork Hood River	Added 1.1 miles (1.8 km) of occupied habitat areas in one stream and removed 1.4 miles (2.3 km) of unoccupied areas in one stream.
MIDDLE COLUMBIA/ HOOD	1707010511	Wind River	Removed 68.8 miles (110.7 km) of unoccupied areas in the Wind River above Shipherd Falls.
MIDDLE COLUMBIA/ HOOD	1707010512	Middle Columbia/Grays Creek	Added 0.4 miles (0.6 km) of occupied habitat areas in one stream.

LOWER COLUMBIA/ SANDY	1708000101	Salmon River	Added 0.6 miles (1.0 km) of occupied habitat areas in two streams.
LOWER COLUMBIA/ SANDY	1708000102	Zigzag River	Added 2.6 miles (4.2 km) of occupied habitat areas in three streams.
LOWER COLUMBIA/ SANDY	1708000103	Upper Sandy River	Added 1.3 miles (2.1 km) of occupied habitat areas in nine streams.
LOWER COLUMBIA/ SANDY	1708000104	Middle Sandy River	Added 1.8 miles (2.9 km) of occupied habitat areas in three streams.
LOWER COLUMBIA/ SANDY	1708000105	Bull Run River	Added 2.5 miles (4.0 km) of occupied habitat areas in one stream.
LOWER COLUMBIA/ SANDY	1708000107	Columbia Gorge Tributaries	Removed 0.5 miles (0.8 km) of unoccupied areas in one stream.
LOWER COLUMBIA/ SANDY	1708000108	Lower Sandy River	Added 0.3 miles (0.5 km) of occupied habitat areas in one stream.
LEWIS	1708000201	Upper Lewis River	Removed 0.2 miles (0.3 km) of unoccupied areas in one stream.
LEWIS	1708000203	Swift Reservoir	Added 4.3 miles (6.9 km) of occupied habitat areas in two streams.
LEWIS	1708000206	Lower Lewis River	Removed 0.4 miles (0.6 km) of unoccupied areas in one stream.
LOWER COLUMBIA/ CLATSKANIE	1708000302	Beaver Creek/Columbia River	Added 6.1 miles (9.8 km) of occupied habitat areas in two streams.

LOWER COLUMBIA/ CLATSKANIE	1708000303	Clatskanie River	Added 0.7 miles (1.1 km) of occupied habitat areas in one stream and removed 1.1 miles (1.8 km) of unoccupied areas in one stream.
LOWER COLUMBIA/ CLATSKANIE	1708000306	Plympton Creek	Removed 1.3 miles (2.1 km) of unoccupied areas in one stream.
UPPER COWLITZ	1708000401	Headwaters Cowlitz River	Removed 0.3 miles (0.5 km) of unoccupied areas in two streams.
UPPER COWLITZ	1708000402	Upper Cowlitz River	Removed 1.1 miles (0.5 km) of unoccupied areas in three streams.
UPPER COWLITZ	1708000403	Cowlitz Valley Frontal	Added 0.1 miles (0.2 km) of occupied habitat areas in one stream and removed 1.3 miles (2.1 km) of unoccupied areas in four streams.
UPPER COWLITZ	1708000404	Upper Cispus River	Removed 0.1 miles (0.2 km) of unoccupied areas in one stream.
UPPER COWLITZ	1708000405	Lower Cispus River	Added 1.0 miles (1.6 km) of occupied habitat areas in two streams and removed 0.9 miles (1.4 km) of unoccupied areas in three streams.
LOWER COWLITZ	1708000501	Tilton River	Added 1.4 miles (2.3 km) of occupied habitat areas in four streams and removed 1.7 miles (2.7 km) of unoccupied areas in seven streams.
LOWER COWLITZ	1708000503	Jackson Prairie	Added 21.5 miles (34.6 km) of occupied habitat areas in eight streams.
LOWER COLUMBIA	1708000601	Youngs River	Added 7.7 miles (12.4 km) of occupied habitat areas in eleven streams and removed 1.3 miles (2.1 km) of unoccupied areas in three streams.

LOWER COLUMBIA	1708000602	Big Creek	Added 1.0 miles (1.6 km) of occupied habitat areas in two streams.
CLACKAMAS	1709001102	Upper Clackamas River	Removed 1.1 miles (1.8 km) of unoccupied areas in one stream.
CLACKAMAS	1709001104	Middle Clackamas River	Added 1.1 miles (1.8 km) of occupied habitat areas in three streams.
CLACKAMAS	1709001106	Lower Clackamas River	Added 0.9 miles (1.4 km) of occupied habitat areas in one stream.
LOWER WILLAMETTE	1709001201	Johnson Creek	Added 4.6 miles (7.4 km) of occupied habitat areas in eleven streams.
LOWER WILLAMETTE	1709001202	Scappoose Creek	Added 6.6 miles (10.6 km) of occupied habitat areas in five streams.
LOWER WILLAMETTE	1709001203	Columbia Slough/Willamette River	Added 5.3 miles (8.5 km) of occupied habitat areas in one stream.

TABLE 2. CHANGES TO CRITICAL HABITAT DESIGNATION FOR PUGET SOUND STEELHEAD.

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
STRAIT OF GEORGIA	1711000201	Bellingham Bay	Added 4.9 miles (7.9 km) of occupied habitat areas in two streams.
STRAIT OF GEORGIA	1711000202	Samish River	Added 0.2 miles (0.3 km) of occupied habitat areas in two streams.

STRAIT OF GEORGIA	1711000204	Birch Bay	Added 2.9 miles (4.7 km) of occupied habitat areas in five streams.
NOOKSACK	1711000401	Upper North Fork Nooksack River	Added 2.0 miles (3.2 km) of occupied habitat areas in seven streams and removed 10.7 miles (17.2 km) of unoccupied areas in five streams.
NOOKSACK	1711000403	South Fork Nooksack River	Added 2.3 miles (3.7 km) of occupied habitat areas in eight streams and removed 3.6 miles (5.8 km) of unoccupied areas in three streams.
NOOKSACK	1711000404	Lower North Fork Nooksack River	Added 2.3 miles (3.7 km) of occupied habitat areas in five streams and removed 4.2 miles (7.6 km) of unoccupied areas in eight streams.
NOOKSACK	1711000405	Nooksack River	Added 10.4 miles (16.7 km) of occupied habitat areas in seven streams and removed 2.3 miles (3.7 km) of unoccupied areas in two streams.
STILLAGUAMISH	1711000801	North Fork Stillaguamish River	Added 0.9 miles (1.4 km) of occupied habitat areas in one stream and removed 2.3 miles (3.7 km) of unoccupied areas in one stream.
STILLAGUAMISH	1711000802	South Fork Stillaguamish River	Added 5.0 miles (8.0 km) of occupied habitat areas in four streams.
STILLAGUAMISH	1711000803	Lower Stillaguamish River	Added 1.0 miles (1.6 km) of occupied habitat areas in one stream.
SNOQUALMIE	1711001004	Lower Snoqualmie River	Added 3.1 miles (5.0 km) of occupied habitat areas in one stream.

SNOHOMISH	1711001101	Pilchuck River	Added 5.4 miles (8.7 km) of occupied habitat areas in four streams.
LAKE WASHINGTON	1711001201	Cedar River	Added 15.5 miles (25.9 km) of occupied habitat areas in nine streams.
DUWAMISH	1711001301	Upper Green River	Added 15.6 miles (25.1 km) of occupied habitat areas in twelve streams.
DUWAMISH	1711001302	Middle Green River	Added 5.8 miles (9.3 km) of occupied habitat areas in four streams.
DUWAMISH	1711001303	Lower Green River	Added 12.1 miles (19.5 km) of occupied habitat areas in six streams.
HOOD CANAL	1711001806	Big Quilcene River	Added 3.1 miles (5.0 km) of occupied habitat areas in one stream and removed 4.1 miles (6.6 km) of unoccupied areas in one stream.
KITSAP	1711001900	Kennedy/Goldsborough	Corrected the erroneous reference to the Puget Sound subbasin in our regulations and added 0.7 miles (1.1 km) of occupied habitat areas in one stream.
KITSAP	1711001901	Puget	Added 4.9 miles (7.9 km) of occupied habitat areas in seven streams.
KITSAP	1711001904	Puget Sound/East Passage	Added 0.4 miles (0.6 km) of occupied habitat areas in one stream.
DUNGENESS/ELWHA	1711002007	Elwha River	Added 2.6 miles (4.2 km) of occupied habitat areas in one stream.

Application of ESA Section 4(b)(2)

Specific areas eligible for designation as critical habitat are those that fall within the ESA section 3(5)(A) definition, not including lands owned or controlled by the DOD, or designated for its use, that are covered by an INRMP that we have determined in writing provides a benefit to the species. Specific areas eligible for designation are not automatically designated as critical habitat. Section 4(b)(2) of the ESA requires that the Secretary consider the economic impact, impact on national security, and any other relevant impact of designating those areas. The Secretary has the discretion to exclude a “particular area” from designation if he determines the benefits of exclusion (that is, avoiding the impact that would result from designation), outweigh the benefits of designation. The Secretary may not exclude an area from designation if, based on the best available scientific and commercial information, exclusion will result in the extinction of the species. Because the authority to exclude is “wholly” discretionary, exclusion is not required for any areas.

The first step in conducting an ESA section 4(b)(2) analysis is to identify the “particular areas” to be analyzed. Section 3(5) of the ESA defines critical habitat as “specific areas,” while section 4(b)(2) requires the agency to consider certain factors before designating any “particular area.” Depending on the biology of the species, the characteristics of its habitat, and the nature of the impacts of designation, “specific” areas might be different from, or the same as, “particular” areas. For lower Columbia River coho and Puget Sound steelhead, we analyzed two types of “particular” areas. Where we considered economic impacts, and weighed the economic benefits of exclusion against the conservation benefits of designation, we used the same biologically based “specific” areas we had identified under section 3(5)(A), the HUC5 watershed. This worked well

because upslope and upstream activities in a watershed can affect the stream within the watershed (see the Final Economic Analysis (NMFS, 2015b) for definition of the HUC5s and more information). This approach allowed us to most effectively consider the conservation value of the different areas when balancing conservation benefits of designation against economic benefits of exclusion. Where we considered impacts on Indian lands and lands subject to a HCP, however, we instead used a delineation of “particular” areas based on ownership or control of the area. Specifically, these particular areas consisted of occupied freshwater and estuarine areas that overlap with Indian and HCP lands. This approach allowed us to consider impacts and benefits associated with land ownership and management by Indian tribes and HCP partners.

The use of two different types of areas required us to account for overlapping boundaries (that is, ownership may span many watersheds and watersheds may have mixed ownership). The order in which we conducted the section 4(b)(2) balancing became important because of this overlap. To ensure we were not double-counting the benefits of exclusion, we first considered exclusion of particular areas based on land ownership and determined which areas to recommend for exclusion. We then considered economic exclusion of particular areas based on watersheds, with the economic impact for each watershed adjusted based on whether a given type of ownership had already been recommended for exclusion.

Benefits of Designation

The primary benefit of designation is the protection afforded under the ESA section 7 requirement that all federal agencies ensure their actions are not likely to destroy or adversely modify designated critical habitat. This type of benefit is sometimes

referred to as an incremental benefit because the protections afforded to the species from critical habitat designation are in addition to the requirement that all federal agencies ensure their actions are not likely to jeopardize the continued existence of the species. In addition, the designation may enhance the conservation of habitat by informing the public about areas and features important to species conservation. This may help focus and contribute to conservation efforts for salmon and steelhead and their habitats.

With sufficient information, it may be possible to monetize these benefits of designation by first quantifying the benefits expected from an ESA section 7 consultation and translating that into dollars. We are not aware, however, of any available data to monetize the benefits of designation (e.g., estimates of the monetary value of the physical and biological features within specific areas that meet the definition of critical habitat, or of the monetary value of general benefits such as education and outreach). In an alternative approach that we have commonly used in the past (70 FR 52630, September 2, 2005), we qualitatively assessed the benefit of designation for each of the specific areas identified as meeting the definition of critical habitat for each DPS. Our qualitative consideration began with an evaluation of the conservation value of each area. We considered a number of factors to determine the conservation value of an area, including the quantity and quality of physical or biological features, the relationship of the area to other areas within the DPS, and the significance to the DPS of the population occupying that area.

There are many federal activities that occur within the specific areas that could impact the conservation value of these areas. Regardless of designation, federal agencies are required under Section 7 of the ESA to ensure these activities are not likely to

jeopardize the continued existence of lower Columbia River coho and Puget Sound steelhead. If the specific areas are designated as critical habitat, federal agencies will additionally be required to ensure their actions are not likely to adversely modify the critical habitat. We grouped the potential federal activities that would be subject to this additional protection into several broad categories: water supply, in-stream work, development, federal lands management, transportation, utilities, mining, and hydropower.

The benefit of designating a particular area depends upon the likelihood of a section 7 consultation occurring in that area and the degree to which a consultation would yield conservation benefits for the species. Based on past consultations for listed salmon and steelhead in this region, we estimated that a total of 55 actions would require section 7 consultation annually for lower Columbia River coho within the particular areas being considered for designation (NMFS, 2015b). For Puget Sound steelhead, we estimated that a total of 117 actions would require section 7 consultation annually within the particular areas being considered for designation (NMFS, 2015b). The most common activity types subject to consultation in the range of each DPS would be in-stream work and transportation projects, accounting for approximately 80 percent of estimated actions (a complete list of the estimated annual actions, allocated by particular area, is included in the Final Economic Analysis (NMFS, 2015b)). These activities have the potential to adversely affect water quality and substrate composition and quality for salmon and steelhead. Consultation would yield conservation benefits for the species by preventing or ameliorating such habitat effects.

Impacts of Designation

Section 4(b)(2) of the ESA provides that the Secretary shall consider “the economic impact, impact on national security, and any other relevant impact of specifying any particular area as critical habitat.” The primary impact of a critical habitat designation stems from the requirement under section 7(a)(2) of the ESA that federal agencies ensure their actions are not likely to result in the destruction or adverse modification of critical habitat. Determining this impact is complicated by the fact that section 7(a)(2) contains the overlapping requirement that federal agencies must ensure their actions are not likely to jeopardize the species’ continued existence. The true impact of designation is the extent to which federal agencies modify their actions to ensure their actions are not likely to destroy or adversely modify the critical habitat of the species, beyond any modifications they would make because of listing and the jeopardy requirement. Additional impacts of designation include state and local protections that may be triggered as a result of the designation. In addition, if the area designated overlaps an area previously designated as critical habitat for another species, the true impact of designation is the modification federal agencies would make beyond any modification they would make to avoid adversely modifying the already-designated critical habitat.

In determining the impacts of designation, we predicted the incremental change in federal agency actions as a result of critical habitat designation and the adverse modification prohibition, beyond the changes predicted to occur as a result of listing and the jeopardy provision. In August 2013, we and the U.S. Fish and Wildlife Service (USFWS) published a final rule amending our joint regulations at 50 CFR 424.19 to make clear that in considering impacts of designation as required by Section 4(b)(2) we would consider the incremental impacts (78 FR 53058, August 28, 2013). More recently,

several courts (including the 9th Circuit Court of Appeals) have approved an approach that considers the incremental impact of designation. The **Federal Register** notice announcing the final rule on considering impacts of designation describes and discusses these court cases (*Arizona Cattlegrowers' Ass'n v. Salazar*, 606 F3d 1160, 1172-74 (9th Cir. 2010), cert. denied, 131 S. Ct. 1471, 179 L. Ed. 2d 300 (2011); *Homebuilders Ass'n v. FWS*, 616 F3d 983, 991-993 (9th Cir. 2010) cert. denied, 131 S. Ct. 1475, 179 L. Ed. 2d 301 (2011)). Further, in more recent critical habitat designations, we and the USFWS have considered the incremental impact of critical habitat designation (for example, our designation of critical habitat for the Southern DPS of green sturgeon (74 FR 52300, October 9, 2009) and the Southern DPS of eulachon (76 FR 65324, October 20, 2011), and the USFWS's designation of critical habitat for the Oregon chub (75 FR 11031, March 10, 2010)). Consistent with our regulation, the more recent court cases, and more recent agency practice, we estimated the incremental impacts of designation, beyond the impacts that would result from the listing and jeopardy provision. In addition, because these designations almost completely overlap our previous salmonid critical habitat designations, and the essential features are the same, we estimated only the incremental impacts of designation beyond the impacts already imposed by those prior designations.

To determine the impact of designation, we examined what the state of the world would be with the designation of critical habitat for the lower Columbia River coho and Puget Sound steelhead DPSs and compared it to the state of the world without the designations. The "without critical habitat" scenario represents the baseline for the analysis. It includes process requirements and habitat protections already afforded these DPSs under their federal listing or under other federal, state, and local regulations. Such

regulations include protections afforded to habitat supporting these two DPSs from other co-occurring ESA listings and critical habitat designations, in particular listings/designations for West Coast salmon and steelhead (70 FR 52630, September 2, 2005). In the case of lower Columbia River coho, the designation overlaps with existing designations for lower Columbia River steelhead and Chinook and Columbia River chum, as well as several DPSs that spawn upstream in the middle and upper Columbia and Snake Rivers. In the case of Puget Sound steelhead, the designation overlaps with existing designations for Puget Sound Chinook and Hood Canal summer-run chum. The "with critical habitat" scenario describes the incremental impacts associated specifically with the designation of critical habitat for lower Columbia River coho and Puget Sound steelhead. The primary impacts of critical habitat designation we found were: (1) the costs associated with additional administrative effort of including a critical habitat analysis in section 7 consultations for these two DPSs, (2) project modifications required solely to avoid destruction or adverse modification of their critical habitat, (3) potential impacts on national security if particular areas were designated critical habitat for Puget Sound steelhead, and (4) the possible harm to our working relationship with Indian tribes and some HCP landowners. There are no military areas eligible for designation that overlap with critical habitat areas, so we did not consider impacts to national security. Because we have chosen to balance benefits and consider exclusions, we consider these impacts in more detail below in the section devoted to each type of impact.

Economic Impacts

Our economic analysis sought to determine the impacts on land uses and activities from the designation of critical habitat that are above and beyond—or incremental to—

those “baseline” impacts due to existing or planned conservation efforts being undertaken due to other federal, state, and local regulations or guidelines (NMFS, 2015b). Other federal agencies, as well as state and local governments, may also seek to protect the natural resources under their jurisdiction. If compliance with the Clean Water Act or State environmental quality laws, for example, protects habitat for the species, such protective efforts are considered to be baseline protections and costs associated with these efforts are not quantified as impacts of critical habitat designation.

When critical habitat is designated, section 7 of the ESA requires federal agencies to ensure that their actions will not result in the destruction or adverse modification of critical habitat (in addition to ensuring that the actions are not likely to jeopardize the continued existence of the species). The added administrative costs of considering critical habitat in section 7 consultations and the additional impacts of implementing project modifications to protect critical habitat are the direct result of the designation of critical habitat. These costs are not in the baseline and are considered incremental impacts of the rulemaking.

Incremental impacts may also include the direct costs associated with additional effort for future consultations, reinitiated consultations, new consultations occurring specifically because of the designation, and additional project modifications that would not have been required to avoid jeopardizing the continued existence of the species. Additionally, incremental impacts may include indirect impacts resulting from reaction to the designation of critical habitat (e.g., developing ESA HCPs in an effort to avoid designation of critical habitat), triggering of additional requirements under State or local

laws intended to protect sensitive habitat, and uncertainty and perceptual effects on markets.

To evaluate the economic impact of critical habitat we first examined our ESA section 7 consultation record for West Coast salmon and steelhead. That voluminous record includes consultations on habitat-modifying federal actions both where critical habitat has been designated and where it has not. As further explained in the supporting economic report (NMFS, 2015b), to quantify the economic impact of designation, we employed the following three steps:

- (1) Define the geographic study area for the analysis, and identify the units of analysis (the “particular areas”). In this case, we defined HUC5 watersheds that encompass occupied stream reaches as the study area.

- (2) Identify potentially affected economic activities and determine how management costs may increase due to the designation of critical habitat for lower Columbia River coho and Puget Sound steelhead, both in terms of project administration and project modification.

- (3) Estimate the economic impacts associated with these changes in management.

We estimated a total annualized incremental cost of approximately \$357,815 for designating all specific areas as critical habitat for lower Columbia River coho. The greatest costs are associated with transportation, water supply, and in-stream work activities (see NMFS, 2015b). The Columbia Slough/Willamette River HUC5 watershed had the largest estimated annual impacts (\$54,000) while the Jackson Prairie HUC5 watershed had the lowest, with zero estimated annual impacts (NMFS, 2015b).

For Puget Sound steelhead, we estimated a total annualized incremental administrative cost of approximately \$460,924 for designating all specific areas as critical habitat. The greatest costs are associated with transportation and in-stream work activities (see NMFS, 2015b). Several watersheds located throughout the range of the DPS had zero estimated annual impacts, while the Lake Washington HUC5 watershed had the largest estimated annual impacts (\$103,000) (NMFS, 2015b).

In weighing economic impacts, we followed the policy direction from Executive Order 12866 to “maximize net benefits” and seek to achieve regulatory objectives in “the most cost effective manner.” Consistent with our past practice for salmon and steelhead critical habitat designations, we took into consideration a cost-effectiveness approach giving priority to excluding habitat areas with a relatively lower benefit of designation and a relatively higher economic impact. The circumstances of these and other listed salmon and steelhead DPSs can make a cost-effectiveness approach useful because different areas have different conservation value relative to one another. Pacific salmon and steelhead are wide-ranging species and occupy numerous habitat areas with thousands of stream miles. Not all occupied areas are of equal importance to conserving a DPS. Within the currently occupied range there are areas that historically were more or less productive, that are currently more or less degraded, or that support populations that are more or less central to conservation of the DPS as a whole. As a result, in many cases it may be possible to construct a designation scenario in which conservation of the DPS as a whole will be possible even if the entire area meeting the definition of critical habitat is not designated. This creates the potential to consider exclusions where conservation values are relatively low and economic impacts are relatively high. This is the same

approach we took in our 2005 salmonid critical habitat designations (70 FR 52630, September 2, 2005) and green sturgeon critical habitat designation (74 FR 52300, October 9, 2009).

In seeking a cost-effective designation that would minimize economic impacts, we also heeded the policy direction to conserve salmon and steelhead habitat described above. In accordance with the policy direction to conserve salmon and steelhead habitat, we are not excluding any habitat areas based on economic impacts if exclusion would “significantly impede conservation.” We adopted this test because habitat loss and degradation are leading factors for the decline of both DPSs (70 FR 37160, June 28, 2005; 72 FR 26722, May 11, 2007), and habitat protection and restoration have been identified as key actions in Lower Columbia River and Puget Sound recovery plans and assessments (Puget Sound Salmon Recovery Plan, 2009; Judge, 2011; NMFS, 2013). Consistent with this test, we did not consider any areas for an economic exclusion that we had identified as having a high conservation value. We gave greater weight to the benefit of designating these high value areas than to the benefit of avoiding economic impacts because of the historic loss and degradation of habitat, the ongoing threats to habitat, and the importance of habitat protection and restoration in recovering the DPSs. The approach taken here is the same approach we took in our 2005 salmon and steelhead critical habitat designations (70 FR 52630, September 2, 2005) and green sturgeon critical habitat designation (74 FR 52300, October 9, 2009). Also consistent with this test, we are not excluding any medium or low quality habitat areas if we concluded that their exclusion would significantly impede conservation, as described further below.

In the first step of balancing economic benefits, we identified for potential exclusion the low value habitat areas with an annual economic impact greater than or equal to \$10,000 and the medium value habitat areas with an annual economic impact greater than or equal to \$100,000. These dollar thresholds are substantially lower than the thresholds we used in our 2005 designations because here we have used the incremental impact of designation, while in the 2005 rule we used the coextensive impact of designation. (Our 2005 rule explains in greater detail how and why we relied on coextensive impacts (see 70 FR 52630, September 2, 2005)). As with the 2005 designations, the thresholds we selected for identifying habitat areas eligible for exclusion do not represent an objective judgment that, for example, a low value area is worth a certain dollar amount and no more. The statute directs us to balance dissimilar values but also emphasizes the discretionary nature of the balancing task. The cost estimates developed by our economic analysis do not have obvious break points that would lead to a logical division between “high,” “medium,” and “low” costs. Given these factors, a judgment that any particular dollar threshold is objectively “right,” would be neither necessary nor possible. Rather, what economic impact is high and, therefore, might outweigh the benefit of designating a medium or low value habitat area is a matter of discretion and depends on the policy context.

In the second step of the process, we asked the Teams whether exclusion of any of the low- or medium-value habitat areas would significantly impede conservation of the DPS. The Teams considered this question in the context of: (1) the Indian lands and HCP lands they assumed would be excluded based on “other relevant impacts” (exclusions discussed later in this report), (2) all of the areas eligible for economic exclusion, and (3)

the information they had developed in providing the conservation ratings. The Critical Habitat Designations section below describes the results of applying the two-step process to each DPS. The results are discussed in greater detail in a separate report that is available for public review (NMFS, 2015c).

Other Relevant Impacts - Impacts to Tribal Sovereignty and Self-governance

Much of the benefit of designating critical habitat on Indian lands is the same as designating critical habitat on other lands. In an ESA section 7 consultation, federal agencies must ensure their actions do not destroy or adversely modify the designated critical habitat, in addition to ensuring their actions do not jeopardize the continued existence of the species. There is a broad array of activities on Indian lands that may trigger section 7 consultations. The other benefit is the notice that designation gives that an area is important to conservation of the species. Both of these benefits may be diminished by the fact that tribes are actively working to address the habitat needs of the species on their lands as well, as in the larger ecosystem, and are fully aware of the conservation value of their lands. (This is documented in correspondence from the tribes, several in response to the agency's ANPR (76 FR 1392, January 10, 2011)).

Indian lands affected by a critical habitat designation only occur within the range of the Puget Sound steelhead DPS, and they comprise only a minor portion (approximately 2 percent) of the total habitat under consideration for designation (NMFS, 2015c). This percentage is likely an overestimate as it includes all habitat area within reservation boundaries. In many cases, a considerable portion of the land within the reservation boundaries is no longer held in trust for the tribe or in fee status by individual tribal members.

The longstanding and distinctive relationship between the federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal Government. This relationship has given rise to a special federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes with respect to Indian lands, tribal trust resources, and the exercise of tribal rights (e.g., Executive Order 13175 and Secretarial Order 3206). Pursuant to these federal policies and authorities, lands have been retained by Indian Tribes or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws.

In addition to the distinctive trust relationship, for Pacific salmonids in the Northwest, there is a unique partnership between the Federal Government and Indian tribes regarding salmonid management. Northwest Indian tribes are regarded as “co-managers” of the salmonid resource, along with federal and state managers. This co-management relationship evolved as a result of numerous court decisions clarifying the tribes’ treaty right to take fish in their usual and accustomed places. The tribes have stated in letters and meetings that designation of Indian lands as critical habitat will undermine long-term working relationships and reduce the capacity of tribes to participate at current levels in the many and varied forums addressing ecosystem management and conservation of fisheries resources. In the decision *Center for Biological Diversity v. Norton*, 240 F. Supp. 2d 1090 (D. Ariz. 2003), the court held that

a positive working relationship with Indian tribes is a relevant impact that can be considered when weighing the relative benefits of a critical habitat.

The current co-manager process addressing activities on an ecosystem-wide basis throughout the Northwest is beneficial for the conservation of the salmonids. We also believe that maintenance of our current co-manager relationship consistent with existing policies is an important benefit to continuance of our tribal trust responsibilities and relationship. Based upon our consultation with the Tribes, we believe that designation of Indian lands as critical habitat would adversely impact our working relationship and the benefits resulting from this relationship. The benefits of excluding Indian lands from designation include: (1) the furtherance of established national policies, our federal trust obligations and our deference to the tribes in management of natural resources on their lands; (2) the maintenance of effective long-term working relationships to promote the conservation of salmonids on an ecosystem wide basis across four states; (3) the allowance for continued meaningful collaboration and cooperation in scientific work to learn more about the conservation needs of the species on an ecosystem-wide basis; and (4) continued respect for tribal sovereignty over management of natural resources on Indian lands through established tribal natural resource programs.

Based upon these considerations, we have determined to exercise agency discretion under ESA section 4(b)(2) and exclude Indian lands from the critical habitat designation for Puget Sound steelhead. The Indian lands specifically excluded from critical habitat are those defined in the Secretarial Order, including: (1) lands held in trust by the United States for the benefit of any Indian tribe; (2) land held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United

States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians. These particular areas comprise only 2 percent of the total area under consideration for designation as critical habitat for Puget Sound steelhead (NMFS, 2015c).

Other Relevant Impacts - Impacts to Landowners with Contractual Commitments to Conservation

Conservation agreements with non-federal landowners (e.g., HCPs) enhance species conservation by extending species protections beyond those available through section 7 consultations. We have encouraged non-federal landowners to enter into conservation agreements, based on a view that we can achieve greater species' conservation on non-federal land through such voluntary partnerships than we can through coercive methods (61 FR 63854, December 2, 1996).

Section 10(a)(1)(B) of the ESA authorizes us to issue to non-federal entities a permit for the incidental take of endangered and threatened species. This permit allows a non-federal landowner to proceed with an activity that is legal in all other respects, but that results in the incidental taking of a listed species (i.e., take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity). The ESA specifies that an application for an incidental take permit must be accompanied by a conservation plan, and specifies the content of such a plan. The purpose of such an HCP is to describe and ensure that the effects of the permitted action on covered species are adequately minimized and mitigated, and that the action does not appreciably reduce the likelihood of the survival and recovery of the species.

In previous critical habitat designations for West Coast salmon and steelhead (70 FR 52630, September 2, 2005), we have exercised discretion to exclude some (but not all) lands covered by an HCP from designation after concluding that benefits of exclusion outweighed the benefits of designation. For lands covered by an HCP, the benefits of designation typically arise from section 7 protections as well as enhanced public awareness. The benefits of exclusion generally include relieving regulatory burdens on existing conservation partners, maintaining good working relationships with them (thus enhancing implementation of existing HCPs), and encouraging the development of new partnerships.

We contacted the HCP landowners whose lands were excluded in our 2005 designations (Washington Department of Natural Resources, Green Diamond Resources Company, and West Fork Timber Company) to discuss the critical habitat designations for lower Columbia River coho and Puget Sound steelhead. We also contacted several additional landowners whose HCPs had been authorized subsequent to our 2005 critical habitat designations (Washington Forest Practices, City of Portland-Bull Run Water Supply, and City of Kent Water Supply) or were existing then but now determined to overlap with new habitat areas being considered for designation (J.L. Storedahl and Sons). All of them except one (City of Portland) requested that their lands be excluded from designation as critical habitat for these DPSs, and were of the opinion that exclusion would be a benefit and enhance the partnership between NMFS and the HCP landowner. We also reviewed the activities covered by the HCPs, the protections afforded by the HCP agreement, and the federal activities that are likely to occur on the affected lands (NMFS, 2015c). From this information, we determined that, in most cases, the

conservation benefits to the species from the HCPs outweigh the conservation benefits of designation and, therefore, are excluding HCP lands where the landowner or regulator demonstrated that exclusion would have the benefit of improving our working relationship with them or with those whose lands were covered by the HCP. One exception involves specific lands on the Kitsap Peninsula that are not currently identified as being actively enrolled under Washington Forest Practices HCP and which we have determined warrant critical habitat designation for Puget Sound steelhead (NMFS 2015c).

Exclusion Will Not Result in Extinction of the Species

Section 4(b)(2) limits our discretion to exclude areas from designation if exclusion will result in extinction of the species.

Because we have not recommended excluding any habitat areas based on economic impacts if the exclusion would significantly impede conservation, we have determined for each DPS that the exclusion of the areas we recommend based on economic impacts will not result in the extinction of either DPS. All areas excluded are of low conservation value. Moreover, they comprise a small fraction—less than 5 percent—of all habitat areas considered for designation as critical habitat for either DPS.

We also conclude that excluding Indian lands—and thereby furthering the federal government’s policy of promoting respect for tribal sovereignty and self-governance—will not result in extinction of either species. Habitat on Indian lands represents a small proportion of total area occupied by the Puget Sound steelhead DPS and the Tribes are actively engaged in fisheries, habitat management, and species recovery programs that benefit steelhead and other salmonids.

In addition, we conclude that excluding lands covered by several HCPs will not result in extinction of either species. These particular HCPs result in management actions that promote conservation of the listed species in a manner that is not available through the section 7 requirements regarding critical habitat. Excluding these HCP areas from designation is expected to enhance our relationship with the landowner and may provide an incentive to other landowners to seek conservation agreements with us. These outcomes will, in turn, generally benefit our recovery efforts to foster voluntary efforts on vast areas of nonfederal lands which make up a large proportion of each species' range and will play a critical role in avoiding species extinction.

In total, for lower Columbia River coho we are designating 2,300 stream miles (3,701 km) and excluding 1,045 stream miles (1,682 km), and for Puget Sound steelhead we are designating 2,031 stream miles (3,269 km) and excluding 1,569 stream miles (2,525 km). For the following reasons, we conclude that these exclusions, in combination, will not result in the extinction of either DPS:

(1) Except for exclusions due to economic impacts, there are no watersheds that are excluded in their entirety. The most area excluded for any single watershed is the Lower West Hood Canal watershed, with 78 percent excluded due to the presence of HCPs. This area was rated as having a low conservation value.

(2) Although the extent of the exclusions overall is significant (nearly 50 percent of the critical habitat for Puget Sound steelhead and nearly 30 percent of the critical habitat for lower Columbia coho), and many of the areas excluded are of medium or high conservation value to the species, most of the exclusions are based on the presence of HCPs, which have a conservation benefit for the species. Also, the likely leverage to

obtain significant conservation benefits from an ESA section 7 consultation is expected to be low for most areas. Because the presence of high quality forested habitat is key to salmon and steelhead recovery, the protections of the HCP, which all involve forested/riparian lands, will have significant benefits over the long term as riparian forest habitat is developed. In addition, we believe that the HCP exclusions, in particular, may provide an incentive to other landowners to seek conservation agreements with us.

(3) The few cases where an entire watershed was excluded (due to economic impacts), the Teams deemed all involved habitat areas to be of low conservation value.

(4) The Indian land exclusions involve stream reaches that are already managed by the tribes for salmonid conservation.

Critical Habitat Designations

In previous salmonid critical habitat designations we identified the end-point of designated stream segments using latitude and longitude coordinates and provided maps depicting the designated areas (70 FR 52630, September 2, 2005). In May of 2012, we and the USFWS amended our regulations regarding critical habitat designation (77 FR 25611, May 1, 2012). The revised regulation provides that the boundaries of critical habitat as mapped or otherwise described in the Regulation Promulgation section of a rulemaking published in the **Federal Register** will be the official delineation of the designation (50 CFR 424.12). In this designation, we include both the latitude-longitude coordinates and maps to make it easier to compare the areas designated with overlapping areas designated for other salmon and steelhead DPSs in 2005 (70 FR 52630, September 2, 2005).

Lower Columbia River Coho Salmon

We are designating approximately 2,300 stream miles (3,701 km) within the geographical area presently occupied by the lower Columbia River coho DPS (see Table 3). Other ESA-listed species in this area with designated critical habitat include lower Columbia River Chinook and steelhead, Columbia River chum (70 FR 52630, September 2, 2005), bull trout (75 FR 63898, October 18, 2010), green sturgeon (74 FR 52300, October 9, 2009), and the Southern DPS of eulachon (76 FR 65324, October 20, 2011). Also, the mainstem lower Columbia River is designated critical habitat for numerous other salmon and steelhead DPSs whose spawning range is upstream of the area presently occupied by lower Columbia River coho (70 FR 52630, September 2, 2005).

TABLE 3.—APPROXIMATE QUANTITY OF HABITAT AND OWNERSHIP WITHIN WATERSHEDS CONTAINING HABITAT AREAS DESIGNATED AS CRITICAL HABITAT FOR LOWER COLUMBIA RIVER COHO SALMON.

Streams and Lakes mi (km)	Land ownership type (percent)			
	Federal	Tribal	State	Private
2,300 (3,701)	14.6	0	2.0	83.4

The areas designated are all occupied and contain physical and biological features essential to the conservation of the species that may require special management considerations or protection. No unoccupied areas were identified that are considered essential for the conservation of the species. There are 55 watersheds within the range of this DPS. Three watersheds received a low conservation value rating, 18 received a

medium rating, and 34 received a high rating (NMFS, 2015a). The lower Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value. As a result of the balancing process for economic impacts described above, we are excluding from the designation all or portions of 28 watersheds listed in Table 4. Of the habitat areas eligible for designation, approximately 27 stream miles (43 km) or 0.8 percent are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 1,018 stream miles (1,638 km) covered by 4 HCPs (J.L. Storedahl and Sons HCP, Washington Department of Natural Resources – West of Cascades HCP, Washington Forest Practices HCP, and West Fork Timber HCP) because the benefits of exclusion outweigh the benefits of designation. None of the HCP exclusions overlap with areas also excluded due to economic impacts. Total estimated economic impact, with no exclusions, is \$357,815. The economic-related exclusions identified in Table 4 would reduce the total estimated economic impact approximately 4 percent to \$344,315 (NMFS, 2015b).

TABLE 4. HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF LOWER COLUMBIA RIVER COHO SALMON AND EXCLUDED FROM CRITICAL HABITAT. WDNR = WASHINGTON DEPARTMENT OF NATURAL RESOURCES; WFP = WASHINGTON FOREST PRACTICES; WFT = WEST FORK TIMBER.

Watershed code	Watershed name	Area(s) excluded
1707010509	Wind River	WFP HCP lands
1707010511	Wind River	WDNR and WFP HCP lands
1707010512	Middle Columbia/Grays Creek	WFP HCP lands
1707010513	Middle Columbia/Eagle Creek	WFP HCP lands

1708000106	Washougal River	WDNR and WFP HCP lands
1708000107	Columbia River Gorge Tributaries	WDNR and WFP HCP lands
1708000109	Salmon Creek	WDNR and WFP HCP lands
1708000201	Upper Lewis River	WFP HCP lands
1708000202	Muddy River	WFP HCP lands
1708000203	Swift Reservoir	WDNR and WFP HCP lands
1708000204	Yale Reservoir	WDNR and WFP HCP lands
1708000205	East Fork Lewis River	WDNR, WFP, and Storedahl HCP lands
1708000206	Lower Lewis River	WDNR and WFP HCP lands
1708000301	Kalama River	WDNR and WFP HCP lands
1708000304	Germany/Abernathy	WDNR and WFP HCP lands
1708000305	Skamokawa/Elochoman	WDNR and WFP HCP lands
1708000402	Upper Cowlitz River	WDNR and WFP HCP lands
1708000403	Cowlitz Valley Frontal	WDNR, WFP, and WFT HCP lands
1708000405	Lower Cispus River	WFP HCP lands
1708000501	Tilton River	WDNR, WFP, and WFT HCP lands
1708000502	Riffe Reservoir	WDNR and WFP HCP lands
1708000503	Jackson Prairie	WDNR and WFP HCP lands
1708000504	North Fork Toutle River	WDNR and WFP HCP lands

1708000506	South Fork Toutle River	WFP HCP lands
1708000507	East Willapa	WDNR and WFP HCP lands
1708000508	Coweeman	WDNR and WFP HCP lands
1708000603	Grays Bay	WDNR and WFP HCP lands
1709000704	Abernethy Creek	Entire watershed due to economic impacts

Puget Sound Steelhead

We are designating approximately 2,031 stream miles (3,269 km) within the geographical area presently occupied by the Puget Sound steelhead DPS (see Table 5).

Other ESA-listed salmonids in this area with designated critical habitat include Puget Sound Chinook, Hood Canal summer-run chum (70 FR 52630, September 2, 2005), and bull trout (75 FR 63898, October 18, 2010).

TABLE 5. APPROXIMATE QUANTITY OF HABITAT AND OWNERSHIP WITHIN WATERSHEDS CONTAINING HABITAT AREAS DESIGNATED AS CRITICAL HABITAT FOR PUGET SOUND STEELHEAD.

Streams mi (km)	Land ownership type (percent)			
	Federal	Tribal	State	Private
2,031 (3,269)	15.5	0	3.8	80.7

The areas designated are all occupied and contain physical and biological features essential to the conservation of the species that may require special management

considerations or protection. One unoccupied area in the upper Elwha River watershed was identified as essential for the conservation of the species and is being designated as critical habitat. There are 66 watersheds within the range of this DPS. Nine watersheds received a low conservation value rating, 16 received a medium rating, and 41 received a high rating to the DPS (NMFS, 2015a).

Approximately 28 stream miles (45 km) are not designated because they are within lands controlled by the military that contain qualifying INRMPs. Approximately 70 miles (113 km) of stream are within the boundaries of Indian reservations, but only those reaches defined as Indian lands (see *Government-to-Government Relationship With Tribes*) are excluded. Also, we are excluding approximately 1,361 miles (2,190 km) of stream covered by four HCPs (City of Kent, Green Diamond, Washington Department of Natural Resources – West of Cascades HCP, and Washington Forest Practices HCP) because the benefits of exclusion outweigh the benefits of designation. As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation all or portions of the 60 watersheds listed in Table 6. Of the habitat areas eligible for designation, approximately 138 stream miles (222 km) or 3.8 percent are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Only a small amount (22 stream miles (35 km)) are excluded due to economic impacts overlap with areas also excluded as HCP lands or Indian lands. Total estimated economic impact, with no exclusions, is \$460,924. The economic-related exclusions identified in Table 6 reduces the total estimated economic impact approximately 29 percent to \$326,966 (NMFS, 2015c).

TABLE 6. HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF PUGET SOUND STEELHEAD AND EXCLUDED FROM CRITICAL HABITAT. WDNR = WASHINGTON DEPARTMENT OF NATURAL RESOURCES; WFP = WASHINGTON FOREST PRACTICES.

Watershed code	Watershed name	Area(s) excluded
1711000201	Bellingham Bay	WDNR and WFP HCP lands
1711000202	Samish River	WDNR and WFP HCP lands
1711000204	Birch Bay	WFP HCP lands
1711000401	Upper North Fork Nooksack River	WDNR and WFP HCP lands
1711000402	Middle Fork Nooksack River	WDNR and WFP HCP lands
1711000403	South Fork Nooksack River	Indian lands and WDNR and WFP HCP lands
1711000404	Lower North Fork Nooksack River	Indian lands and WDNR and WFP HCP lands
1711000405	Nooksack River	Indian lands and WDNR and WFP HCP lands
1711000504	Skagit River/Gorge Lake	WFP HCP lands
1711000505	Skagit River/Diobsud Creek	WDNR and WFP HCP lands
1711000506	Cascade River	WDNR and WFP HCP lands
1711000507	Skagit River/Illabot Creek	WDNR and WFP HCP lands
1711000508	Baker River	WFP HCP lands
1711000601	Upper Sauk River	WFP HCP lands
1711000603	Lower Suiattle River	WDNR and WFP HCP lands
1711000604	Lower Sauk River	Indian lands and WDNR and

		WFP HCP lands
1711000701	Middle Skagit River/Finney Creek	WDNR and WFP HCP lands
1711000702	Lower Skagit River/Nookachamps Creek	WDNR and WFP HCP lands
1711000801	North Fork Stillaguamish River	WDNR and WFP HCP lands
1711000802	South Fork Stillaguamish River	WDNR and WFP HCP lands and DOD lands
1711000803	Lower Stillaguamish River	WDNR and WFP HCP lands
1711000901	Tye and Beckler Rivers	WDNR and WFP HCP lands
1711000902	Skykomish River Forks	WDNR and WFP HCP lands
1711000903	Skykomish River/Wallace River	WDNR and WFP HCP lands
1711000904	Sultan River	WDNR and WFP HCP lands
1711000905	Skykomish River/Woods Creek	WDNR and WFP HCP lands
1711001003	Middle Fork Snoqualmie River	WDNR and WFP HCP lands
1711001004	Lower Snoqualmie River	WDNR and WFP HCP lands
1711001101	Pilchuck River	WDNR and WFP HCP lands
1711001102	Snohomish River	Indian lands and WDNR and WFP HCP lands
1711001201	Cedar River	WDNR and City of Kent HCP lands
1711001202	Lake Sammamish	Entire watershed due to economic impacts (including

		WDNR and WFP HCP lands)
1711001203	Lake Washington	Entire watershed due to economic impacts
1711001204	Sammamish River	Entire watershed due to economic impacts (including WDNR and WFP HCP lands)
1711001301	Upper Green River	WFP HCP lands
1711001302	Middle Green River	Indian lands and WDNR HCP lands
1711001303	Lower Green River	Indian lands
1711001401	Upper White River	WDNR and WFP HCP lands
1711001402	Lower White River	Indian lands and WFP HCP lands
1711001403	Carbon River	WDNR and WFP HCP lands
1711001405	Lower Puyallup River	Indian lands and WFP HCP lands
1711001502	Mashel/Ohop	WDNR and WFP HCP lands
1711001503	Lowland	Indian lands, DOD lands, and WFP HCP lands
1711001601	Prairie 1	WFP HCP lands
1711001602	Prairie 2	WFP HCP lands
1711001701	Skokomish River	Indian lands and WFP and

		Green Diamond HCP lands
1711001802	Lower West Hood Canal Frontal	WDNR and WFP HCP lands
1711001804	Duckabush River	WDNR and WFP HCP lands
1711001806	Big Quilcene River	WDNR and WFP HCP lands
1711001807	Upper West Hood Canal Frontal	WDNR and WFP HCP lands and DOD lands
1711001808	West Kitsap	WDNR and WFP HCP lands (except those WFP HCP lands overlapping with areas occupied by Puget Sound steelhead and not classified as being in an approved or renewed status by the Washington Department of Natural Resources as of September 2015)
1711001900	Kennedy/Goldsborough	Indian lands and WDNR and WFP, and Green Diamond HCP lands
1711001901	Puget	WDNR and WFP HCP lands (except those WFP HCP lands overlapping with areas

		occupied by Puget Sound steelhead and not classified as being in an approved or renewed status by the Washington Department of Natural Resources as of September 2015)
1711001902	Prairie 3	WDNR and WFP HCP lands
1711001906	Chambers Creek	DOD Lands
1711001908	Port Ludlow/Chimacum Creek	WDNR and WFP HCP lands
1711002001	Discovery Bay	WDNR and WFP HCP lands
1711002002	Sequim Bay	Indian lands and WDNR and WFP HCP lands
1711002003	Dungeness River	WDNR and WFP HCP lands
1711002004	Port Angeles Harbor	WDNR and WFP HCP lands
1711002007	Elwha River	Indian lands and WDNR and WFP HCP lands

Lateral Extent of Critical Habitat

In past designations, we have described the lateral extent of critical habitat in various ways, ranging from fixed distances to “functional” zones defined by important riparian functions (65 FR 7764, February 16, 2000). Designating a set riparian zone width will (in some places) accurately reflect the distance from the stream on which essential

features might be found, but in other cases may overstate or understate the distance. Designating a functional buffer avoids that problem, but makes it difficult for federal agencies to know in advance what areas are critical habitat. To address these issues, we are defining the lateral extent of designated critical habitat as the width of the stream channel defined by the ordinary high water line as defined by the U.S. Army Corps of Engineers in 33 CFR 329.11. In areas for which ordinary high-water has not been defined pursuant to 33 CFR 329.11, the width of the stream channel shall be defined by its bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain (Rosgen, 1996) and is reached at a discharge which generally has a recurrence interval of 1 to 2 years on the annual flood series (Leopold *et al.*, 1992). Such an interval is commensurate with nearly all of the juvenile freshwater life phases of most salmon and steelhead DPSs. Therefore, it is reasonable to assert that for an occupied stream reach this lateral extent is regularly “occupied.” Moreover, the bankfull elevation can be readily discerned for a variety of stream reaches and stream types using recognizable water lines (e.g., marks on rocks) or vegetation boundaries (Rosgen, 1996). Since 2005, this has proven to be a successful approach for defining the lateral extent of critical habitat for West Coast salmon and steelhead (70 FR 52630, September 2, 2005); therefore, we will continue the practice in this final rule.

As underscored in previous critical habitat designations, the quality of aquatic habitat within stream channels is intrinsically related to the adjacent riparian zones and floodplain, surrounding wetlands and uplands, and non-fish-bearing streams above occupied stream reaches. Human activities that occur outside the stream or designated critical habitat can modify or destroy physical and biological features of the stream. In

addition, human activities that occur within and adjacent to reaches upstream (e.g., road failures) or downstream (e.g., dams) of designated stream reaches can also have demonstrable effects on physical and biological features of designated reaches. This designation will help to ensure that federal agencies are aware of these important habitat linkages for lower Columbia River coho and Puget Sound steelhead.

In the few cases where we are designating lakes/reservoirs as critical habitat, the lateral extent may best be defined as the perimeter of the water body as displayed on standard 1:24,000 scale topographic maps or the elevation of ordinary high water, whichever is greater.

Effects of Critical Habitat Designation

Section 7(a)(2) of the ESA requires federal agencies to insure that any action authorized, funded, or carried out by the agency (agency action) does not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify designated critical habitat. When a species is listed or critical habitat is designated, federal agencies must consult with us on any agency actions to be conducted in an area where the species is present and that may affect the species or its critical habitat. During the consultation, we evaluate the agency action to determine whether the action may adversely affect listed species or critical habitat and issue our findings in a biological opinion. If we conclude in the biological opinion that the agency action would likely result in the destruction or adverse modification of critical habitat, we would also recommend any reasonable and prudent alternatives to the action. Reasonable and prudent alternatives are defined in 50 CFR 402.02 as alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended

purpose of the action, that are consistent with the scope of the federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid the destruction or adverse modification of critical habitat.

Regulations at 50 CFR 402.16 require federal agencies that have retained discretionary involvement or control over an action, or where such discretionary involvement or control is authorized by law, to reinitiate consultation on previously reviewed actions in instances in which (1) critical habitat is subsequently designated; or (2) new information or changes to the action may result in effects to critical habitat not previously considered in the biological opinion. Consequently, some federal agencies may request re-initiation of a consultation with us on actions for which formal consultation has been completed if those actions may affect designated critical habitat.

Activities subject to the ESA section 7 consultation process include activities on federal lands and activities on private or state lands requiring a permit from a federal agency (e.g., a Clean Water Act, Section 404 dredge or fill permit from U.S. Army Corps of Engineers) or some other federal action, including funding (e.g., ESA Section 6, Federal Highway Administration, or Federal Emergency Management Agency funding). Section 7 consultation would not be required for federal actions that do not affect listed species or critical habitat, nor for actions on non-federal and private lands that are not carried out, funded, or authorized by a federal agency.

Activities That May be Affected by Critical Habitat Designation

ESA section 4(b)(8) requires in any proposed or final regulation to designate critical habitat an evaluation and brief description of those activities (whether public or private) that may adversely modify such habitat or that may be affected by such

designation. A wide variety of activities may affect designated critical habitat and may be subject to the ESA section 7 consultation process when carried out, funded, or authorized by a federal agency. These include water and land management actions of numerous federal agencies (i.e., Bonneville Power Administration, Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), Department of Housing and Urban Development, DOD, Farm Service Agency, Federal Emergency Management Agency (FEMA), Federal Energy Regulatory Commission (FERC), Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration, NOAA, National Park Service (NPS), Natural Resource Conservation Service, Nuclear Regulatory Commission (NRC), U.S. Army Corps of Engineers (USACE), U.S. Bureau of Reclamation (BOR), U.S. Coast Guard, U.S. Department of Energy, U.S. Department of Transportation, U.S. Forest Service (USFS), USFWS, and U.S. Geological Survey) and related or similar federally-regulated projects and activities on federal lands, including hydropower sites licensed by the FERC; nuclear power sites licensed by the NRC; dams built or operated by the USACE or BOR; timber sales and other vegetation management activities conducted by the USFS, BLM and BIA; irrigation diversions authorized by the USFS and BLM; and road building and maintenance activities authorized by the USFS, BLM, NPS, and BIA. Other actions of concern include: dredging and filling, mining, diking, and bank stabilization activities authorized or conducted by the USACE; habitat modifications authorized by FEMA; and approval of water quality standards and pesticide labeling and use restrictions administered by the Environmental Protection Agency.

Private entities may also be affected by these critical habitat designations if a federal permit is required, if federal funding is received, or the entity is involved in or receives benefits from a federal project. For example, private entities may have special use permits to convey water or build access roads across federal land; they may require federal permits to construct irrigation withdrawal facilities, or build or repair docks; they may obtain water from federally funded and operated irrigation projects; or they may apply pesticides that are only available with federal agency approval. These activities will need to be evaluated with respect to their potential to destroy or adversely modify critical habitat for lower Columbia River coho and Puget Sound steelhead. Changes to some activities, such as the operations of dams and dredging activities, may be necessary to minimize or avoid destruction or adverse modification of critical habitat. Transportation and utilities sectors may need to modify the placement of culverts, bridges, and utility conveyances (e.g., water, sewer, and power lines) to avoid barriers to fish migration. Developments (e.g., marinas, residential, or industrial facilities) occurring in or near streams, estuaries, or marine waters designated as critical habitat that require federal authorization or funding may need to be altered or built in a manner to ensure that critical habitat is not destroyed or adversely modified as a result of the construction or subsequent operation of the facility. Questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat should be directed to NMFS (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

Information Quality Act and Peer Review

The data and analyses supporting this action have undergone a pre-dissemination review and have been determined to be in compliance with applicable information quality

guidelines implementing the Information Quality Act (IQA) (Section 515 of Public Law 106–554). In December 2004, the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review pursuant to the IQA. The Bulletin was published in the **Federal Register** on January 14, 2005 (70 FR 2664). The Bulletin established minimum peer review standards, a transparent process for public disclosure of peer review planning, and opportunities for public participation with regard to certain types of information disseminated by the Federal Government. The peer review requirements of the OMB Bulletin apply to influential or highly influential scientific information disseminated on or after June 16, 2005. Two documents supporting these critical habitat designations are considered influential scientific information and subject to peer review. These documents are the final biological report (NMFS, 2015a) and final economic analysis (NMFS, 2015b). We distributed these documents for independent peer review and have addressed all comments received in developing the final drafts of the two reports. Both documents are available on our website at <http://www.westcoast.fisheries.noaa.gov/>.

Classification

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996), whenever an agency publishes a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a final regulatory flexibility analysis describing the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). We prepared a final regulatory flexibility analysis (which

incorporates information from the initial regulatory flexibility analysis) as part of the final economic analysis (NMFS, 2015b). This document is available upon request (see **ADDRESSES** section above) and can be found on our website at <http://www.westcoast.fisheries.noaa.gov/>. The results of the final regulatory flexibility analysis are summarized below, organized by determinations prescribed in section 604 of the Regulatory Flexibility Act (5 U.S.C. 601, *et seq.*).

(1) This rule is needed in order to comply with the ESA's requirement to designate critical habitat to the maximum extent prudent and determinable when species are listed as threatened or endangered. The objectives of this action are to help conserve threatened lower Columbia River coho and Puget Sound steelhead by identifying critical habitat areas, consistent with the best available scientific information, that contain the physical and biological features essential to the conservation of the species and which may require special management considerations or protection. Once designated, this critical habitat can be protected through the ESA section 7 consultation process in which NMFS and federal action agencies review the effects of federal actions on the survival and recovery of these species.

(2) We solicited but did not receive comments on our initial regulatory flexibility analysis from the public nor from the Chief Counsel for Advocacy of the Small Business Administration.

(3) The impacts to small businesses were assessed for the following broad categories of activities: hydropower, development, in-stream work, water supply, federal lands management, transportation, utilities, mining, and other activities (including water, sewer, and oil/gas pipeline construction). Small entities are defined by the Small Business

Administration size standards for each activity type. Of potentially affected entities, 89 percent are classified as likely to be “small.” We estimated the annualized costs associated with ESA section 7 consultations incurred per small business under two different scenarios. We developed these scenarios because unavailable or inadequate data leaves some uncertainty surrounding both the numbers of entities that will be subject to the rule and the characteristics of any impacts on particular entities. Under Scenario 1, our analysis estimates the number of small entities located within areas that may be affected by the designation (approximately 5,381 for lower Columbia River coho, and 12,758 for Puget Sound steelhead), and assumes that incremental impacts are distributed evenly across all entities in each affected activity category (i.e., an assumption that accounts for uncertainties in available data). Under this scenario, for lower Columbia River coho, a small entity may bear costs up to \$3,430, representing less than 0.12 percent of average revenues (depending on the activity category). For Puget Sound steelhead, a small entity may bear costs up to \$1,260, representing less than 0.05 percent of average revenues (depending on the activity category).

Under scenario 2, our analysis assumes costs of each anticipated future consultation are borne by a distinct small business (approximately 55 entities for lower Columbia River coho, 117 for Puget Sound steelhead). Under this scenario, in the range of lower Columbia River coho critical habitat, each small entity may bear costs of between \$1,120 and \$31,000, representing between <0.01 and 0.46 percent of average annual revenues, depending on the activity category. In the range of Puget Sound steelhead critical habitat, each small entity may bear costs of between \$510 and \$5,930,

representing between <0.01 and 0.17 percent of average annual revenues, depending on the activity category.

(4) There are no record-keeping or reporting requirements associated with this final rule. Similarly, there are no other compliance requirements in the rule. There are no professional skills necessary for preparation of any report or record.

(5) In accordance with the requirements of the Regulatory Flexibility Act (as amended by the Small Business Regulatory Enforcement Fairness Act of 1996), our analysis considered various alternatives to the critical habitat designations for these DPSs. The alternative of not designating critical habitat for these DPSs was considered and rejected because such an approach does not meet the legal requirements of the ESA. We also examined and rejected a second alternative in which all the potential critical habitat for these two DPSs is designated (i.e., no areas are excluded) because some of the areas considered to have a low conservation value also had relatively high economic impacts that might be mitigated by excluding those areas from designation. A third alternative we examined and rejected would exclude all habitat areas with a low or medium conservation value. While this alternative furthers the goal of reducing economic impacts, it is not sensitive to the fact that, for both of these DPSs, eliminating all habitat areas with low and medium conservation value is likely to significantly impede conservation. Moreover, for some habitat areas the incremental economic benefit from excluding that area is relatively small or zero. Therefore, after considering these three alternatives in the context of the section 4(b)(2) process of weighing benefits of exclusion against benefits of designation, we determined that the approach used in this final rule (i.e., designating some, but not all, areas with low or medium conservation value)

provides an appropriate balance of conservation and economic mitigation and that excluding the areas identified in this rulemaking will not result in extinction of the DPSs.

Executive Order 12866

This final rule has been determined to be not significant under Executive Order 12866.

Executive Order 13211

On May 18, 2001, the President issued an executive order on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking any action that promulgates or is expected to lead to the promulgation of a final rule or regulation that (1) is a significant regulatory action under Executive Order 12866 and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy.

We have considered the potential impacts of this action on the supply, distribution, or use of energy and find the designation of critical habitat will not have impacts that exceed the thresholds identified above (NMFS, 2015b).

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act, we make the following findings:

(a) This final rule will not produce a federal mandate. In general, a federal mandate is a provision in legislation, statute or regulation that would impose an enforceable duty upon state, local, tribal governments, or the private sector and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate”

includes a regulation that “would impose an enforceable duty upon State, local, or tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to state, local, and tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding” and the state, local, or tribal governments “lack authority” to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.)

“Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program.” The designation of critical habitat does not impose a legally binding duty on non-federal government entities or private parties. Under the ESA, the only regulatory effect is that federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-federal entities which receive federal funding, assistance, permits or otherwise require approval or authorization from a federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the federal

agency. Furthermore, to the extent that non-federal entities are indirectly impacted because they receive federal assistance or participate in a voluntary federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above to state governments.

(b) Due to the existing protection afforded to the critical habitat from existing critical habitat for salmon and steelhead (70 FR 52630, September 2, 2005), Southern DPS of green sturgeon (74 FR 52300, October 9, 2009), bull trout (70 FR 56212, September 26, 2005), and the Southern DPS of eulachon (76 FR 65324, October 20, 2011), we do not anticipate that this final rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

Takings

Under Executive Order 12630, federal agencies must consider the effects of their actions on constitutionally protected private property rights and avoid unnecessary takings of property. A taking of property includes actions that result in physical invasion or occupancy of private property, and regulations imposed on private property that substantially affect its value or use. In accordance with Executive Order 12630, this final rule does not have significant takings implications. A takings implication assessment is not required. The designation of critical habitat affects only federal agency actions. We do not expect the critical habitat designations will impose additional burdens on land use or affect property values. Additionally, the critical habitat designations do not preclude the development of HCPs and issuance of incidental take permits for non-federal actions. Owners of areas included within the critical habitat designations would continue to have

the opportunity to use their property in ways consistent with the survival of listed salmon and steelhead.

Federalism

In accordance with Executive Order 13132, we determined that this final rule does not have significant Federalism effects and that a Federalism assessment is not required. In keeping with Department of Commerce policies, we request information from, and will coordinate development of these critical habitat designations with, appropriate state resource agencies in Oregon and Washington. The final designations may have some benefit to state and local resource agencies in that the areas essential to the conservation of the species are more clearly defined, and the essential features of the habitat necessary for the survival of the subject DPSs are specifically identified. It may also assist local governments in long-range planning (rather than waiting for case-by-case ESA section 7 consultations to occur).

Government-to-Government Relationship With Tribes

Pursuant to Executive Order 13175 and Secretarial Order 3206, we contacted the affected Indian Tribes when considering the designation of critical habitat in an area that may impact tribal trust resources, tribally owned fee lands or the exercise of tribal rights. All of the responding tribes expressed concern about the intrusion into tribal sovereignty that critical habitat designation represents. These concerns are consistent with previous responses from tribes when we developed critical habitat designations for salmon and steelhead in 2005 (70 FR 52630, September 2, 2005). The Secretarial Order defines Indian lands as “any lands title to which is either: (1) held in trust by the United States for the benefit of any Indian tribe or (2) held by an Indian Tribe or individual subject to

restrictions by the United States against alienation.’’ Our conversations with the tribes indicate that they view the designation of Indian lands as an unwanted intrusion into tribal self-governance, compromising the government-to-government relationship that is essential to achieving our mutual goal of conserving threatened and endangered salmonids.

For the general reasons described in the *Other Relevant Impacts - Impacts to Tribal Sovereignty and Self-Governance* section above, the ESA Section 4(b)(2) analysis has led us to exclude all Indian lands in our final designations for lower Columbia River coho and Puget Sound steelhead.

Civil Justice Reform

The Department of Commerce has determined that this final rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of Executive Order 12988. We are designating critical habitat in accordance with the provisions of the ESA. This final rule uses standard property descriptions and identifies the essential features within the designated areas to assist the public in understanding the habitat needs of lower Columbia River coho and Puget Sound steelhead.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This final rule does not contain new or revised information collection requirements for which OMB approval is required under the Paperwork Reduction Act (PRA). This final rule will not impose recordkeeping or reporting requirements on state or local governments, individuals, businesses, or organizations. Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the

requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

National Environmental Policy Act of 1969 (NEPA)

We have determined that an environmental analysis as provided for under NEPA is not required for critical habitat designations made pursuant to the ESA. See *Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied, 116 S. Ct. 698 (1996).

Coastal Zone Management Act

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1456) requires that all federal activities that affect the land or water use or natural resource of the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. We have determined that these final designations of critical habitat are consistent to the maximum extent practicable with the enforceable policies of approved Coastal Zone Management Programs of Oregon and Washington.

References Cited

A complete list of all references cited in this rulemaking can be found on our website at <http://www.westcoast.fisheries.noaa.gov/> and is available upon request from the NMFS office in Portland, Oregon (see **ADDRESSES**).

List of Subjects

50 CFR Part 223

Endangered and threatened species, Exports, Transportation.

50 CFR Part 226

Endangered and threatened species.

Dated: February 11, 2016.

Samuel D. Rauch, III.

Deputy Assistant Administrator for Regulatory Programs,
National Marine Fisheries Service.

For the reasons set out in the preamble, we amend 50 CFR parts 223 and 226 as follows:

PART 223—THREATENED MARINE AND ANADROMOUS SPECIES

1. The authority citation for part 223 continues to read as follows:

Authority: 16 U.S.C. 1531-1543 and 16 U.S.C 1361 *et seq.*

2. In § 223.102, in the table in paragraph (e) under “Fishes,” amend the entries for “Salmon, coho (Lower Columbia River ESU)” and “Steelhead (Puget Sound DPS)” by adding the cross-references in the “Critical habitat” column to read as follows:

§ 223.102 Enumeration of threatened marine and anadromous species.

* * * * *

(e) * * *

Species ¹			Citation(s) for listing Determination(s)	Critical Habitat	ESA rules
Common name	Scientific name	Description of listed entity			

Fishes					

Salmon, coho (Lower Columbia River ESU)	***	***	***	226.212	***

Steelhead (Puget Sound DPS)	***	***	***	226.212	***

* * * * *

PART 226—DESIGNATED CRITICAL HABITAT

3. The authority citation of part 226 continues to read as follows:

Authority: 16 U.S.C. 1533.

4. In § 226.212:

- a. Revise the section heading and introductory text;
- b. Revise paragraph (a) introductory text;
- c. Add paragraphs (a)(14) and (15);

- d. Revise paragraph (c) introductory text and paragraphs (e)(9) and (e)(23) and (24);
- e. Add paragraph (e)(25);
- f. Revise paragraph (f) introductory text;
- g. Add paragraphs (f)(1), (f)(2), (f)(5), and (f)(6);
- h. Redesignate paragraphs (g) and (h) as paragraphs (f)(3) and (f)(4);
- i. Revise newly redesignated paragraphs (f)(3) and (f)(4);
- j. Redesignate paragraphs (i) through (u) as paragraphs (g) through (s); and
- i. Add paragraphs (t) and (u).

The revisions and additions read as follows:

§ 226.212 Critical habitat for 15 Distinct Population Segments (DPSs) of salmon and steelhead (*Oncorhynchus* spp.) in Washington, Oregon and Idaho.

Critical habitat is designated in the following states and counties for the following DPSs as described in paragraph (a) of this section, and as further described in paragraphs (b) through (g) of this section. The textual descriptions of critical habitat for each DPS are included in paragraphs (i) through (w) of this section, and these descriptions are the definitive source for determining the critical habitat boundaries. General location maps are provided at the end of each DPS description (paragraphs (i) through (w) of this section) and are provided for general guidance purposes only, and not as a definitive source for determining critical habitat boundaries.

(a) Critical habitat is designated for the following DPSs in the following states and counties:

DPS	***
*****	*****
(14) Lower Columbia River coho salmon.....	(i) <i>OR</i> —Clackamas, Clatsop, Columbia, Hood River, Marion, and Multnomah. (ii) <i>WA</i> —Clark, Cowlitz, Klickitat, Lewis, Pacific, Skamania, and Wahkiakum.
(15) Puget Sound steelhead.....	<i>WA</i> —Clallam, Jefferson, King, Kitsap, Mason, Pierce, Skagit, Snohomish, Thurston, and Whatcom.

(c) *Primary constituent elements.* Within these areas, the primary constituent elements essential for the conservation of these DPSs are those sites and habitat components that support one or more life stages, including:

(e) ***

(9) Fort Lewis (Joint Base Lewis-McChord - Army and Air Force);

(23) Dabob Bay/Whitney Point naval restricted area;

(24) Port Townsend/Indian Island/Walan Point naval restricted area; and

(25) Naval Base Kitsap.

(f) *Land covered by an approved Habitat Conservation Plan.* Critical habitat does not include any areas subject to an approved incidental take permit issued by NMFS under section 10(a)(1)(B) of the ESA. The specific sites addressed include those associated with the following Habitat Conservation Plans:

(1) Washington Department of Natural Resources – West of Cascades

(2) Washington State Forest Practices, except those lands on the Kitsap Peninsula overlapping with areas occupied by Puget Sound steelhead and not classified as being in an approved or renewed status by the Washington Department of Natural Resources as of September 2015.

(3) Green Diamond Company.

(4) West Fork Timber Company.

(5) City of Kent.

(6) J.L. Storedahl and Sons.

* * * * *

(t) *Lower Columbia River Coho Salmon (Oncorhynchus kisutch).* Critical habitat is designated to include the areas defined in the following subbasins:

(1) Middle Columbia-Hood Subbasin 17070105—(i) *East Fork Hood River Watershed 1707010506.* Outlet(s) = Hood River (Lat 45.605237, Long -121.633264); upstream to endpoint(s) in: Bear Creek (45.491952, -121.648262); Cat Creek (45.470499, -121.555174); Dog River (45.447412, -121.567406); East Fork Hood River (45.310783, -121.626954); East Fork Hood River (45.412671, -121.570369); Evans Creek (45.486998, -121.590438); Graham Creek (45.551655, -121.567021); Griswell Creek (45.522055, -121.577151); Pinnacle Creek (45.460671, -121.656379); Pocket Creek (45.302362, -

121.597799); Tony Creek (45.540932, -121.644048); Yellowjacket Creek (45.502652, -121.561138).

(ii) *West Fork Hood River Watershed 1707010507*. Outlet(s) = West Fork Hood River (Lat 45.605237, Long -121.633264); upstream to endpoint(s) in: Green Point Creek (45.590219, -121.681893); McGee Creek (45.443322, -121.774845).

(iii) *Hood River Watershed 1707010508*. Outlet(s) = Hood River (Lat 45.712335, Long -121.508062); upstream to endpoint(s) in: Lenz Creek (45.627282, -121.527217); Unnamed (45.695827, -121.499524); Hood River (45.605237, -121.633264); Neal Creek (45.589032, -121.495443); West Fork Neal Creek (45.589791, -121.50157); Whiskey Creek (45.682589, -121.507362).

(iv) *White Salmon River Watershed 1707010509*. Outlet(s) = White Salmon River (Lat 45.722453, Long -121.522507); upstream to endpoint(s) in: White Salmon River (45.767475, -121.538582).

(v) *Little White Salmon River Watershed 1707010510*. Outlet(s) = Little White Salmon River (Lat 45.709771, -121.648828); upstream to endpoint(s) in: Little White Salmon River (45.721722, -121.640905).

(vi) *Wind River Watershed 1707010511*. Outlet(s) = Wind River (Lat 45.708031, Long -121.7937); upstream to endpoint(s) in: Little Wind River (45.764902, -121.743713); Wind River (45.738012, -121.805768).

(vii) *Middle Columbia/Grays Creek Watershed 1707010512*. Outlet(s) = Columbia River (Lat 45.704232, Long -121.799197); upstream to endpoint(s) in: Unnamed (45.709771, -121.648828); Unnamed (45.71305, -121.765469); Unnamed (45.717006, -121.775974); Unnamed (45.724676, -121.733359); Dog Creek (45.711575,

-121.670928); Gorton Creek (45.691091, -121.773139); Columbia River (45.712335, -121.508062); Lindsey Creek (45.686538, -121.716427); Perham Creek (45.694389, -121.636322); Viento Creek (45.697116, -121.668995).

(viii) *Middle Columbia/Eagle Creek Watershed 1707010513*. Outlet(s) = Unnamed (Lat 45.644489, Long -121.940679); upstream to endpoint(s) in: Unnamed (45.665271, -121.8177); Unnamed (45.667271, -121.849896); Unnamed (45.668788, -121.845446); Unnamed (45.681125, -121.861863); Unnamed (45.710132, -121.845697); Camp Creek (45.667436, -121.817935); Carson Creek (45.715784, -121.820829); Columbia River (45.704232, -121.799197); Eagle Creek (45.636481, -121.918349); East Fork Herman Creek (45.653835, -121.814038); Herman Creek (45.65053, -121.819282); Kanaka Creek (45.703936, -121.886202); Nelson Creek (45.70486, -121.863199); Ruckel Creek (45.646027, -121.920243).

(2) Lower Columbia-Sandy Subbasin 17080001—(i) *Salmon River Watershed 1708000101*. Outlet(s) = Salmon River (Lat 45.247288, Long -121.897384); upstream to endpoint(s) in: Unnamed (45.294351, -121.93992); Unnamed (45.327567, -121.964685); Unnamed (45.333577, -121.954887); Unnamed (45.343325, -121.993355); Bighorn Creek (45.261413, -121.920687); Boulder Creek (45.344594, -122.022551); Cheeney Creek (45.298138, -121.966984); Copper Creek (45.250573, -121.906523); Salmon River (45.250793, -121.903932); South Fork Salmon River (45.262376, -121.94569); Welches Creek (45.322357, -121.96209); Little Cheney Creek (45.315925, -121.957706).

(ii) *Zigzag River Watershed 1708000102*. Outlet(s) = Zigzag River (Lat 45.348502, Long -121.945268); upstream to endpoint(s) in: Unnamed (45.264488, -121.835176); Unnamed (45.309925, -121.867436); Little Zigzag Canyon (45.313577, -

121.804646); Camp Creek (45.304981, -121.813197); Cool Creek (45.292765, -121.884534); Henry Creek (45.328447, -121.895142); Lady Creek (45.319762, -121.823709); Still Creek (45.266162, -121.82967); Wind Creek (45.298307, -121.856182); Zigzag River (45.326883, -121.779753).

(iii) *Upper Sandy River Watershed 1708000103*. Outlet(s) = Sandy River (Lat 45.348695, -121.945224); upstream to endpoint(s) in: Unnamed (45.375211, -121.831255); Unnamed (45.381082, -121.827389); Unnamed (45.38147, -121.902185); Unnamed (45.394711, -121.794578); Unnamed (45.399767, -121.901436); Unnamed (45.37727, -121.865508); Unnamed (45.393118, -121.862562); Unnamed (45.388254, -121.908771); Cast Creek (45.38071, -121.858383); Clear Creek (45.398769, -121.855261); Clear Fork (45.402752, -121.848249); Little Clear Creek (45.379681, -121.914907); Lost Creek (45.372028, -121.818608); Minikahda Creek (45.36933, -121.94042); Sandy River (45.388349, -121.842458); Short Creek (45.376861, -121.863405).

(iv) *Middle Sandy River Watershed 1708000104*. Outlet(s) = Sandy River (Lat 45.446429, Long -122.248369); upstream to endpoint(s) in: Unnamed (45.37949, -122.03096); Unnamed (45.386346, -122.036698); Unnamed (45.371975, -122.039565); Unnamed (45.380525, -122.033513); Alder Creek (45.376772, -122.100846); Bear Creek (45.336648, -121.927798); Cedar Creek (45.404272, -122.252578); Hackett Creek (45.352288, -121.951609); North Boulder Creek (45.384502, -122.014263); Whisky Creek (45.377566, -122.128088); Wildcat Creek (45.370157, -122.077485).

(v) *Bull Run River Watershed 1708000105*. Outlet(s) = Bull Run River (Lat 45.445672, -122.247943); upstream to endpoint(s) in: Bull Run River (45.449500, -122.1536); Little Sandy River (45.408124, -122.066052).

(vi) *Washougal River Watershed 1708000106*. Outlet(s) = Washougal River (Lat 45.581011, Long -122.408885); upstream to endpoint(s) in: Unnamed (45.58717, -122.413316); Unnamed (45.600016, -122.332175); Unnamed (45.611824, -122.242999); Unnamed (45.612809, -122.324998); Unnamed (45.620381, -122.345921); Unnamed (45.626874, -122.34346); Unnamed (45.627736, -122.256085); Unnamed (45.629474, -122.247482); Unnamed (45.638035, -122.292731); Unnamed (45.647483, -122.367738); Unnamed (45.648358, -122.334455); Unnamed (45.650547, -122.157413); Unnamed (45.653255, -122.275218); Unnamed (45.657929, -122.220622); Unnamed (45.659093, -122.207653); Unnamed (45.6692, -122.156539); Unnamed (45.670112, -122.34117); Unnamed (45.672008, -122.173594); Unnamed (45.674178, -122.299555); Unnamed (45.683465, -122.334825); Unnamed (45.696755, -122.315224); Unnamed (45.700417, -122.32238); Unnamed (45.708896, -122.266302); Unnamed (45.708947, -122.252235); Unnamed (45.720695, -122.249333); Unnamed (45.729294, -122.195616); Cougar Creek (45.651259, -122.268846); Dougan Creek (45.67684, -122.153333); East Fork Little Washougal River (45.672014, -122.283888); Jackson Creek (45.675271, -122.254193); Jones Creek (45.689112, -122.291063); Lacamas Creek (45.597039, -122.394477); Texas Creek (45.689165, -122.187421); Washougal River (45.67269, -122.153567); West Fork Washougal River (45.733609, -122.214819); Wildboy Creek (45.671, -122.218436); Winkler Creek (45.632735, -122.261321); Hagen Creek (45.706875, -122.25864); Little

Washougal River (45.676574, -122.342287); Little Washougal River (45.653083, -122.347546); Winkler Creek (45.631081, -122.26165).

(vii) *Columbia Gorge Tributaries Watershed 1708000107*. Outlet(s) = Columbia River (Lat 45.573261, Long -122.397377); upstream to endpoint(s) in: Unnamed (45.548138, -122.351565); Unnamed (45.588566, -122.294521); Unnamed (45.590912, -122.2823); Unnamed (45.593653, -122.144297); Unnamed (45.596322, -122.298126); Unnamed (45.602186, -122.045501); Unnamed (45.603278, -122.117957); Unnamed (45.60427, -122.114465); Unnamed (45.604686, -122.111908); Unnamed (45.608658, -122.034755); Unnamed (45.618526, -122.046564); Unnamed (45.627848, -122.059877); Unnamed (45.644489, -121.940679); Unnamed (45.648055, -121.973672); Unnamed (45.648286, -121.937896); Unnamed (45.651152, -121.948423); Unnamed (45.663009, -121.945288); Unnamed (45.668112, -121.944275); Unnamed (45.705738, -122.030562); Unnamed (45.706583, -122.030264); Unnamed (45.712761, -122.031391); Bridal Veil Creek (45.554125, -122.180231); Campen Creek (45.588421, -122.32304); Coopey Creek (45.56249, -122.165304); Duncan Creek (45.668084, -122.087311); Gibbons Creek (45.578553, -122.280402); Greenleaf Creek (45.680477, -121.961898); Hamilton Creek (45.724649, -122.025155); Hardy Creek (45.637053, -122.006906); Horsetail Creek (45.588381, -122.068121); Indian Mary Creek (45.626983, -122.08352); Latourell Creek (45.54047, -122.218884); Lawton Creek (45.57449, -122.251177); Little Creek (45.644317, -122.037293); McCord Creek (45.611378, -121.994145); Moffett Creek (45.618491, -121.967182); Multnomah Creek (45.575938, -122.115489); Oneonta Creek (45.582044, -122.072688); Tanner Creek (45.629297, -121.954011); Tumalt Creek (45.609963, -122.029615); Wahkeena Creek (45.573123, -122.126812); Walton Creek

(45.575513, -122.26303); Woodward Creek (45.632266, -122.044788); Young Creek (45.546713, -122.198337); Hardy Creek (45.633735, -121.99603).

(viii) *Lower Sandy River Watershed 1708000108*. Outlet(s) = Sandy River (Lat 45.574301, Long -122.380188); upstream to endpoint(s) in: Unnamed (45.553991, -122.377876); Beaver Creek (45.497368, -122.360034); Big Creek (45.506685, -122.297833); Buck Creek (45.497012, -122.277464); Cat Creek (45.489237, -122.238503); Gordon Creek (45.502328, -122.181652); Kelly Creek (45.513162, -122.396503); Middle Fork Beaver Creek (45.488652, -122.352533); Sandy River (45.446429, -122.248369); Trout Creek (45.481334, -122.27692).

(ix) *Salmon Creek Watershed 1708000109*. Outlet(s) = Unnamed (Lat 45.608827, Long -122.628396); Unnamed (45.782133, -122.770935); Unnamed (45.79137, -122.779096); Lake River (45.842318, -122.780058); Unnamed (45.583634, -122.493678); Unnamed (45.725544, -122.762187); Unnamed (45.708956, -122.765945); upstream to endpoint(s) in: Unnamed (45.597056, -122.48085); Unnamed (45.618497, -122.625455); Unnamed (45.692522, -122.750865); Unnamed (45.705359, -122.654729); Unnamed (45.736541, -122.738658); Unnamed (45.740616, -122.457587); Unnamed (45.741057, -122.541219); Unnamed (45.745405, -122.701278); Unnamed (45.750243, -122.641509); Unnamed (45.751664, -122.635603); Unnamed (45.758152, -122.697981); Unnamed (45.759293, -122.753826); Unnamed (45.760094, -122.420422); Unnamed (45.760678, -122.510984); Unnamed (45.763086, -122.392563); Unnamed (45.766128, -122.402833); Unnamed (45.768661, -122.410137); Unnamed (45.768856, -122.458956); Unnamed (45.771241, -122.481058); Unnamed (45.77272, -122.42969); Unnamed (45.779683, -122.608053); Unnamed (45.783976, -122.432545); Unnamed (45.785031, -

122.709594); Unnamed (45.788669, -122.739027); Unnamed (45.796251, -122.438508); Unnamed (45.801421, -122.517285); Unnamed (45.807105, -122.454757); Unnamed (45.807885, -122.425007); Unnamed (45.808519, -122.754502); Unnamed (45.813822, -122.449343); Unnamed (45.817459, -122.771105); Unnamed (45.827212, -122.764666); Burnt Bridge Creek (45.660818, -122.511162); Cold Canyon (45.663287, -122.66699); Cougar Canyon Creek (45.707212, -122.682567); Curtin Creek (45.684387, -122.586094); Flume Creek (45.779893, -122.71596); Lalonde Creek (45.707849, -122.642314); Little Salmon Creek (45.784979, -122.421225); Mill Creek (45.77898, -122.566195); Morgan Creek (45.751434, -122.446616); Mud Creek (45.731816, -122.478143); Packard Creek (45.757922, -122.699539); Rock Creek (45.815043, -122.456123); Salmon Creek (45.757766, -122.424507); Weaver Creek (45.793553, -122.495211); Whipple Creek (45.734817, -122.657695).

(3) Lewis Subbasin 17080002—(i) *Upper Lewis River Watershed 1708000201*.

Outlet(s) = Lewis River (Lat 46.069463, Long -122.006838); upstream to endpoint(s) in: Big Creek (46.094659, -121.913097); Chickoon Creek (46.148528, -121.878749); Crab Creek (46.141771, -121.890849); Curly Creek (46.057396, -121.970510); Cussed Hollow (46.148088, -121.904757); Lewis River (46.154732, -121.880642); Little Creek (46.071497, -121.911930); Pepper Creek (46.076039, -121.986316); Rush Creek (46.050925, -121.905817); Spencer Creek (46.143417, -121.910603).

(ii) *Muddy River Watershed 1708000202*. Outlet(s) = Muddy River (Lat 46.069463, Long -122.006838); upstream to endpoint(s) in: Clear Creek (46.210439, -121.951602); Clearwater Creek (46.208811, -122.016938); Muddy River (46.180853, -122.070616); Smith Creek (46.229009, -122.091210).

(iii) *Swift Reservoir Watershed 1708000203*. Outlet(s) = Lewis River (46.061988, -122.192687); upstream to endpoint(s) in: Unnamed (46.067280, -122.031517); Unnamed (46.030884, -122.025805); Unnamed (46.021441, -122.094836); Unnamed (46.076975, -122.134548); Unnamed (46.096016, -122.067449); Drift Creek (45.992711, -122.064320); Lewis River (46.069463, -122.006838); Marble Creek (46.075248, -122.138077); Pine Creek (46.123411, -122.079154); Range Creek (46.028641, -122.121759); Swift Creek (46.090717, -122.205248).

(iv) *Yale Reservoir Watershed 1708000204*. Outlet(s) = Lewis River (Lat 45.966180, -Long 122.334825); upstream to endpoint(s) in: Dog Creek (46.061456, -122.317143); Cougar Creek (46.071149, -122.269881); Lewis River (46.061988, -122.192687); Ole Creek (46.049968, -122.239259); Panamaker Creek (46.076309, -122.298414); Rain Creek (46.041972, -122.204391).

(v) *East Fork Lewis River Watershed 1708000205*. Outlet(s) = Gee Creek (Lat 45.846474, Long -122.784009); East Fork Lewis River (45.865974, -122.720015); ; upstream to endpoint(s) in: Unnamed (45.780025, -122.60805); Unnamed (45.794783, -122.698153); Unnamed (45.801134, -122.682844); Unnamed (45.804692, -122.580745); Unnamed (45.807413, -122.629756); Unnamed (45.814729, -122.56657); Unnamed (45.816914, -122.575875); Unnamed (45.822904, -122.708092); Unnamed (45.823983, -122.639331); Unnamed (45.828994, -122.605197); Unnamed (45.835126, -122.485374); Unnamed (45.836667, -122.650975); Unnamed (45.837829, -122.469846); Unnamed (45.846989, -122.749763); Unnamed (45.847364, -122.649785); Unnamed (45.848031, -122.441525); Unnamed (45.849976, -122.524001); Unnamed (45.853522, -122.598543); Unnamed (45.855146, -122.593372); Unnamed (45.859839, -122.612419); Unnamed

(45.861417, -122.70149); Unnamed (45.866041, -122.5784); Unnamed (45.866516, -122.575586); Unnamed (45.867718, -122.647281); Unnamed (45.869512, -122.678967); Unnamed (45.872474, -122.647396); Unnamed (45.875583, -122.487609); Unnamed (45.881115, -122.478516); Unnamed (45.905677, -122.519797); Allen Creek (45.827926, -122.698134); Basket Creek (45.832585, -122.459163); Brezee Creek (45.880461, -122.655871); East Fork Lewis River (45.839345, -122.447538); Gee Creek (45.791622, -122.674464); Jenny Creek (45.870366, -122.700692); Lockwood Creek (45.8722, -122.612928); Mason Creek (45.865932, -122.544237); McCormick Creek (45.851953, -122.691964); Riley Creek (45.872133, -122.62657); Unnamed Creek (45.843693, -122.648975).

(vi) *Lower Lewis River Watershed 1708000206*. Outlet(s) = Lewis River (Lat 45.855546, Long -122.775762); upstream to endpoint(s) in: Unnamed (45.870633, -122.756138); Unnamed (45.88666, -122.723102); Unnamed (45.892632, -122.422093); Unnamed (45.893766, -122.438283); Unnamed (45.901311, -122.727541); Unnamed (45.919994, -122.535139); Unnamed (45.920149, -122.456867); Unnamed (45.920747, -122.693543); Unnamed (45.923838, -122.424899); Unnamed (45.924295, -122.37431); Unnamed (45.928026, -122.689314); Unnamed (45.929363, -122.504918); Unnamed (45.939172, -122.41088); Unnamed (45.941429, -122.704591); Unnamed (45.942762, -122.671288); Unnamed (45.943605, -122.620229); Unnamed (45.944513, -122.644954); Unnamed (45.947599, -122.643073); Bitter Creek (45.913105, -122.460482); Brush Creek (45.927783, -122.468661); Cedar Creek (45.906562, -122.381815); Chelatchie Creek (45.935564, -122.379567); Colvin Creek (45.939847, -122.609332); Houghton Creek (45.951179, -122.634346); John Creek (45.943278, -122.477146); Johnson Creek

(45.953443, -122.61949); Lewis River (45.966180, -122.334825); North Fork Chelatchie Creek (45.945494, -122.393811); Pup Creek (45.948425, -122.525655); Robinson Creek (45.936812, -122.725723); Ross Creek (45.94883, -122.703391); Staples Creek (45.942126, -122.667681).

(4) Lower Columbia-Clatskanie Subbasin 17080003—(i) *Kalama River Watershed 1708000301*. Outlet(s) = Burris Creek (Lat 45.892513, Long -122.790279); Bybee Creek (45.966376, -122.816532); Kalama River (46.03393, -122.870595); Mill Creek (45.95816, -122.803634); Schoolhouse Creek (45.978378, -122.829247); Unnamed (45.999928, -122.848159); upstream to endpoint(s) in: Unnamed (45.903312, -122.780386); Unnamed (45.934119, -122.781977); Unnamed (45.977147, -122.825526); Unnamed (45.993614, -122.813527); Unnamed (46.043843, -122.856105); Burke Creek (45.94516, -122.775084); Burke Slough (45.924545, -122.797017); Burris Creek (45.932376, -122.743342); Bybee Creek (45.969366, -122.814717); Cedar Creek (46.03313, -122.812264); Hatchery Creek (46.049047, -122.801448); Indian Creek (46.049668, -122.752333); Indian Creek (46.0452, -122.752907); Kalama River (46.025868, -122.739474); Mill Creek (45.961948, -122.795944); Schoolhouse Creek (45.981238, -122.825927); Spencer Creek (46.025203, -122.829696).

(ii) *Beaver Creek/Columbia River Watershed 1708000302*. Outlet(s) = Beaver Slough (Lat 46.121253, Long -123.22089); Fox Creek (46.092512, -122.938467); Goble Creek (46.020615, -122.876532); Green Creek (46.166661, -123.099119); Tide Creek (45.994307, -122.866712); upstream to endpoint(s) in: Unnamed (45.914995, -122.870367); Unnamed (45.985132, -122.928842); Unnamed (46.0165, -122.963794); Unnamed (46.019529, -122.944997); Unnamed (45.919698, -122.809782); Beaver Creek

(46.104384, -123.124089); Fox Creek (46.069709, -122.937725); Goble Creek (46.006921, -122.989536); Green Creek (46.143721, -123.074477); McBride Creek (45.889718, -122.827703); Merrill Creek (45.908708, -122.887674); North Fork Stewart Creek (46.134963, -123.142788); South Fork Goble Creek (45.967146, -122.912205); Stewart Creek (46.121924, -123.134473); Tide Creek (45.998871, -123.005909).

(iii) *Clatskanie River Watershed 1708000303*. Outlet(s) = Beaver Slough (Lat 46.139926, Long -123.230807); upstream to endpoint(s) in: Unnamed (45.871279, -123.016852); Unnamed (46.057, -123.256303); Unnamed (46.095794, -123.22606); Beaver Slough (46.121253, -123.22089); Carcus Creek (45.988589, -123.087952); Clatskanie River (45.878919, -122.9959); Conyers Creek (46.056042, -123.241614); Dribble Creek (45.902229, -123.009241); Fall Creek (46.10887, -123.212892); Keystone Creek (46.075658, -123.145555); Little Clatskanie River (45.914012, -122.995923); Merril Creek (46.081981, -123.187026); Miller Creek (46.043933, -123.146664); North Fork Clatskanie River (46.028796, -123.052308); Page Creek (46.04337, -123.126689); Perkins Creek (46.045692, -123.202675).

(iv) *Germany/Abernathy Watershed 1708000304*. Outlet(s) = Abernathy Creek (46.190946, -123.16764); Coal Creek Slough (46.189618, -123.116548); Germany Creek (46.190472, -123.124221); Mill Creek (Lat 46.188644, Long -123.175717); upstream to endpoint(s) in: Unnamed (46.174387, -123.284405); Unnamed (46.177806, -123.244713); Unnamed (46.179048, -123.28534); Unnamed (46.179783, -123.014957); Unnamed (46.199235, -123.017367); Unnamed (46.209772, -123.250435); Unnamed (46.210569, -123.02174); Unnamed (46.2212, -123.233862); Unnamed (46.230005, -123.243579); Unnamed (46.23735, -123.217724); Unnamed (46.257704, -123.211771);

Unnamed (46.260394, -123.156937); Unnamed (46.282123, -123.215419); Unnamed (46.28956, -123.229955); Unnamed (46.302937, -123.18012); Unnamed (46.30502, -123.175317); Unnamed (46.313744, -123.186815); Unnamed (46.315329, -123.111068); Unnamed (46.318441, -123.123571); Unnamed (46.329631, -123.132487); Abernathy Creek (46.298183, -123.20799); Cameron Creek (46.266183, -123.196747); Coal Creek (46.214039, -123.020114); Erick Creek (46.283486, -123.165659); Germany Creek (46.323938, -123.150029); Harmony Creek (46.191588, -123.045625); Hunter Creek (46.200371, -123.277768); Midway Creek (46.280132, -123.179387); North Fork Mill Creek (46.237142, -123.227829); Ordway Creek (46.312588, -123.1944); Slide Creek (46.251167, -123.180153); South Fork Mill Creek (46.184454, -123.282779); Spruce Creek (46.19379, -123.270758); Wiest Creek (46.27626, -123.159368).

(v) *Skamokawa/Elochoman Watershed 1708000305*. Outlet(s) = Birnie Creek (Lat 46.200249, Long -123.388149); Elochoman River (46.22667, -123.400822); Jim Crow Creek (46.266028, -123.552297); Skamokawa Creek (46.268566, -123.45637); upstream to endpoint(s) in: Unnamed (46.225162, -123.303945); Unnamed (46.242407, -123.369715); Unnamed (46.264248, -123.311602); Unnamed (46.268968, -123.328113); Unnamed (46.27795, -123.384622); Unnamed (46.281109, -123.369818); Unnamed (46.294907, -123.320218); Unnamed (46.299508, -123.553063); Unnamed (46.30403, -123.499255); Unnamed (46.30564, -123.54826); Unnamed (46.320411, -123.244937); Unnamed (46.320842, -123.35815); Unnamed (46.325433, -123.281587); Unnamed (46.328108, -123.296011); Unnamed (46.33764, -123.44219); Unnamed (46.337892, -123.462614); Unnamed (46.34415, -123.256674); Unnamed (46.347782, -123.392349); Unnamed (46.349787, -123.211987); Unnamed (46.351596, -123.313042); Unnamed

(46.35173, -123.19359); Unnamed (46.360802, -123.261039); Unnamed (46.364365, -123.276383); Unnamed (46.368463, -123.242642); Unnamed (46.377205, -123.262108); Unnamed (46.382024, -123.242299); Unnamed (46.386679, -123.223722); Unnamed (46.303663, -123.365059); Unnamed (46.311328, -123.478976); Unnamed (46.306534, -123.546046); Beaver Creek (46.216566, -123.297152); Bell Canyon Creek (46.288173, -123.405772); Birnie Creek (46.204016, -123.384532); Cadman Creek (46.302299, -123.508597); Clear Creek (46.260761, -123.300874); Duck Creek (46.265653, -123.337856); East Fork Elochoman River (46.378345, -123.193512); Falk Creek (46.321532, -123.381397); Fink Creek (46.276734, -123.570228); Jim Crow Creek (46.312074, -123.539923); Kelly Creek (46.32257, -123.48111); Left Fork Skamokawa Creek (46.339453, -123.470344); Longtain Creek (46.25861, -123.369188); McDonald Creek (46.346651, -123.382328); Nelson Creek (46.257717, -123.35252); North Fork Elochoman River (46.375393, -123.284959); Otter Creek (46.388034, -123.217495); Pollard Creek (46.307613, -123.412558); Quarry Creek (46.337806, -123.42712); Risk Creek (46.25136, -123.399855); Rock Creek (46.277795, -123.275871); Standard Creek (46.333628, -123.357041); West Fork Elochoman River (46.351711, -123.329823); West Fork Skamokawa Creek (46.327805, -123.498954); West Valley Creek (46.291358, -123.51591); Wilson Creek (46.31583, -123.328008); Unnamed Creek (46.306534, -123.546046); Unnamed Creek (46.311328, -123.478976); Unnamed Creek (46.386679, -123.223722); Unnamed Creek (46.303663, -123.365059).

(vi) *Plympton Creek Watershed 1708000306*. Outlet(s) = Hunt Creek (Lat 46.202277, Long -123.445724); Westport Slough (46.143868, -123.383472); upstream to endpoint(s) in: Eilertsen Creek (46.099706, -123.328684); Graham Creek (46.09157, -

123.277339); Hunt Creek (46.120882, -123.428478); Ok Creek (46.099703, -123.321777); Olsen Creek (46.101357, -123.360299); Plympton Creek (46.127423, -123.391111); Ross Creek (46.108505, -123.368667); Tandy Creek (46.102255, -123.293854); West Creek (46.121298, -123.373425); Westport Slough (46.124151, -123.245135).

(5) Upper Cowlitz Subbasin 17080004—(i) *Headwaters Cowlitz River Watershed 1708000401*. Outlet(s) = Cowlitz River (Lat 46.657731, Long -121.604374); upstream to endpoint(s) in: Unnamed (46.675388, -121.580086); Clear Fork Cowlitz River (46.684326, -121.568004); Muddy Fork Cowlitz River (46.696095, -121.617841); Ohanapecosh River (46.68812, -121.582120); Purcell Creek (46.671171, -121.587667).

(ii) *Upper Cowlitz River Watershed 1708000402*. Outlet(s) = Cowlitz River (46.576161, -121.706256); Johnson Creek (Lat 46.575836, Long -121.705564); upstream to endpoint(s) in: Unnamed (46.62375, -121.671832); Unnamed (46.641142, -121.654691); Unnamed (46.654671, -121.631508); Unnamed (46.692847, -121.803752); Butter Creek (46.646075, -121.675424); Coal Creek (46.643541, -121.611604); Cowlitz River (46.657731, -121.604374); Hall Creek (46.60701, -121.662269); Hinkle Tinkle Creek (46.651852, -121.63912); Johnson Creek (46.555366, -121.639734); Lake Creek (46.623804, -121.61673); Skate Creek (46.684892, -121.806283).

(iii) *Cowlitz Valley Frontal Watershed 1708000403*. Outlet(s) = Cowlitz River (Lat 46.476278, Long -122.096306); upstream to endpoint(s) in: Unnamed (46.489922, -122.083268); Unnamed (46.518735, -121.858756); Burton Creek (46.541954, -121.750428); Cowlitz River (46.576161, -121.706256); Cunningham Creek (46.512691, -121.844636); Davis Creek (46.527807, -121.827406); Dry Creek (46.560084, -

121.705732); Garrett Creek (46.523043, -121.773614); Hampton Creek (46.537971, -121.939923); Hopkin Creek (46.53512, -121.841854); Johnson Creek (Lat 46.575836, Long -121.705564); Kilborn Creek (46.507622, -121.801739); Kiona Creek (46.564304, -122.049702); Miller Creek (46.539348, -121.960377); Oliver Creek (46.543328, -121.993492); Peters Creek (46.538087, -121.983762); Schooley Creek (46.500722, -121.964414); Sethe Creek (46.534578, -121.867518); Siler Creek (46.492992, -121.911187); Silver Creek (46.55632, -121.91673); Smith Creek (46.561932, -121.693911); Surrey Creek (46.543475, -121.888707); Willame Creek (46.580526, -121.733077).

(iv) *Upper Cispus River Watershed 1708000404*. Outlet(s) = Cispus River (Lat 46.443752, Long -121.798269); upstream to endpoint(s) in: Cispus River (46.344891, -121.68424); East Canyon Creek (46.347337, -121.703867); North Fork Cispus River (46.435538, -121.657768); Twin Creek (46.374273, -121.729578).

(v) *Lower Cispus River Watershed 1708000405*. Outlet(s) = Cispus River (Lat 46.476761, Long -122.095709); upstream to endpoint(s) in: Unnamed (46.430554, -121.825682); Unnamed (46.455387, -121.954511); Unnamed (46.465418, -121.958732); Unnamed (46.452951, -122.046625); Ames Creek (46.466423, -121.918257); Camp Creek (46.449033, -121.832281); Cispus River (Lat 46.443752, Long -121.798269); Copper Canyon Creek (46.467296, -122.082101); Covell Creek (46.431961, -121.851825); Crystal Creek (46.445224, -122.024601); Dry Creek (46.452466, -121.852225); Greenhorn Creek (46.421576, -121.905397); Iron Creek (46.38938, -121.971317); McCoy Creek (46.389343, -121.822002); Quartz Creek (46.42561, -

122.053071); Woods Creek (46.475527, -121.949635); Yellowjacket Creek (46.386924, -121.834674).

(6) Cowlitz Subbasin 17080005—(i) *Tilton River Watershed 1708000501*.

Outlet(s) = Tilton River (Lat 46.543356, Long -122.533164); upstream to endpoint(s) in: Unnamed (46.588777, -122.17989); Unnamed (46.608368, -122.314024); Unnamed (46.595355, -122.27852); Coal Creek (46.573383, -122.243464); Connelly Creek (46.603783, -122.316111); Coon Creek (46.615117, -122.275972); Eagle Creek (46.653164, -122.259058); East Fork Tilton River (46.594049, -122.170519); Jesse Creek (46.644485, -122.414873); Johnson Creek (46.531381, -122.237744); Little Creek (46.666231, -122.404381); Minnie Creek (46.539791, -122.234089); Nineteen Creek (46.599433, -122.22251); Otter Creek (46.620348, -122.409391); Rockies Creek (46.642452, -122.399153); Snow Creek (46.620326, -122.266924); South Fork Tilton Creek (46.564501, -122.161837); Tilton River (46.624549, -122.215133); Trout Creek (46.65834, -122.25936); Wallanding Creek (46.621001, -122.372088); West Fork Tilton River (46.658406, -122.308887); Winnie Creek (46.654766, -122.420066).

(ii) *Riffe Reservoir Watershed 1708000502*. Outlet(s) = Cowlitz River (Lat 46.5031, Long -122.588332); upstream to endpoint(s) in: Cowlitz River (46.476278, -122.096306); Winston Creek (46.459003, -122.370859).

(iii) *Jackson Prairie Watershed 1708000503*. Outlet(s) = Cowlitz River (Lat 46.367511, Long -122.934945); upstream to endpoint(s) in: Unnamed (46.383522, -122.679974); Unnamed (46.383941, -122.725937); Unnamed (46.385081, -122.705907); Unnamed (46.387856, -122.695831); Unnamed (46.39224, -122.75946); Unnamed (46.399666, -122.898638); Unnamed (46.400754, -122.733303); Unnamed (46.409488, -

122.589866); Unnamed (46.410097, -122.680278); Unnamed (46.410422, -122.708726);
 Unnamed (46.411433, -122.756574); Unnamed (46.413363, -122.783988); Unnamed
 (46.417067, -122.637699); Unnamed (46.424466, -122.818117); Unnamed (46.427206, -
 122.613403); Unnamed (46.428381, -122.643499); Unnamed (46.429253, -122.83625);
 Unnamed (46.431112, -122.808741); Unnamed (46.440469, -122.519079); Unnamed
 (46.445258, -122.867273); Unnamed (46.449715, -122.529087); Unnamed (46.450991, -
 122.871663); Unnamed (46.472774, -122.686245); Unnamed (46.488493, -122.807753);
 Unnamed (46.517532, -122.654378); Unnamed (46.5309, -122.820885); Unnamed
 (46.533357, -122.758003); Unnamed (46.542935, -122.748007); Unnamed (46.464970, -
 122.610288); Unnamed (46.448115, -122.654992); Unnamed (46.442894, -122.667057);
 Unnamed (46.442944, -122.700366); Unnamed (46.465822, -122.580513); Unnamed
 (46.449279, -122.605026); Bear Creek (46.463967, -122.913037); Blue Creek
 (46.488339, -122.726491); Brights Creek (46.496407, -122.605179); Cedar Creek
 (46.482264, -122.580944); Coon Creek (46.445182, -122.895851); Cougar Creek
 (46.393389, -122.795962); Cowlitz River (46.5031, -122.588332); Foster Creek
 (46.40711, -122.890926); Hopkey Creek (46.459049, -122.554437); Jones Creek
 (46.518881, -122.675281); Lacamas Creek (46.556204, -122.688969); Little Salmon
 Creek (46.439872, -122.747395); Mill Creek (46.517371, -122.622126); Mill Creek
 (46.502438, -122.803167); North Fork Cedar Creek (46.462224, -122.673900); Otter
 Creek (46.479854, -122.700841); Pin Creek (46.411782, -122.832479); Rapid Creek
 (46.432098, -122.547553); Skook Creek (46.474731, -122.757751); Unnamed Creek
 (46.515124, -122.681226).

(iv) *North Fork Toutle River Watershed 1708000504*. Outlet(s) = North Fork Toutle River (Lat 46.371819, Long -122.585848); upstream to endpoint(s) in: Unnamed (46.292893, -122.508359); Unnamed (46.294391, -122.526416); Unnamed (46.317597, -122.321791); Unnamed (46.321385, -122.488684); Unnamed (46.331761, -122.316562); Bear Creek (46.309744, -122.430749); Hoffstadt Creek (46.319718, -122.325454).

(v) *Green River Watershed 1708000505*. Outlet(s) = North Fork Toutle River (Lat 46.366681, Long -122.587092); upstream to endpoint(s) in: Unnamed (46.332935, -122.298073); Unnamed (46.33485, -122.279213); Unnamed (46.355641, -122.205783); Unnamed (46.359811, -122.326801); Unnamed (46.373265, -122.389499); Unnamed (46.38427, -122.434721); Unnamed (46.387374, -122.488301); Unnamed (46.402102, -122.555537); Unnamed (46.40583, -122.542922); Unnamed (46.408718, -122.507384); Unnamed (46.410468, -122.431267); Unnamed (46.412392, -122.451557); Unnamed (46.416538, -122.283286); Unnamed (46.42, -122.292272); Unnamed (46.422599, -122.304017); Unnamed (46.428205, -122.267496); Beaver Creek (46.405735, -122.568826); Cascade Creek (46.417916, -122.331675); Devils Creek (46.401481, -122.409722); Elk Creek (46.41719, -122.250256); Green River (46.394118, -122.205161); Jim Creek (46.388361, -122.526853); Miners Creek (46.349143, -122.194242); Shultz Creek (46.344058, -122.275039); Tradedollar Creek (46.376142, -122.23987).

(vi) *South Fork Toutle River Watershed 1708000506*. Outlet(s) = Toutle River (Lat 46.329223, Long -122.725131); upstream to endpoint(s) in: Unnamed (46.185704, -122.299471); Unnamed (46.186193, -122.40715); Unnamed (46.188524, -122.445753); Unnamed (46.199665, -122.471338); Unnamed (46.201636, -122.296552); Unnamed

(46.206594, -122.331284); Unnamed (46.21036, -122.431482); Unnamed (46.21081, -122.427763); Unnamed (46.210915, -122.428229); Unnamed (46.211429, -122.279573); Unnamed (46.215533, -122.347972); Unnamed (46.223287, -122.327701); Unnamed (46.223773, -122.524201); Unnamed (46.226916, -122.337898); Unnamed (46.227233, -122.373391); Unnamed (46.238958, -122.490827); Unnamed (46.243346, -122.38038); Unnamed (46.245202, -122.629903); Unnamed (46.258398, -122.534433); Unnamed (46.260587, -122.550523); Unnamed (46.261618, -122.571707); Unnamed (46.268347, -122.577391); Unnamed (46.287125, -122.685581); Unnamed (46.292576, -122.659948); Unnamed (46.295532, -122.596926); Unnamed (46.296678, -122.585207); Unnamed (46.297388, -122.614534); Unnamed (46.310391, -122.606122); Unnamed (46.311754, -122.626346); Unnamed (46.312178, -122.704274); Unnamed (46.321553, -122.649148); Bear Creek (46.187484, -122.431406); Big Wolf Creek (46.225469, -122.567295); Brownell Creek (46.280407, -122.649708); Disappointment Creek (46.213614, -122.309153); Eighteen Creek (46.244881, -122.600184); Harrington Creek (46.247692, -122.419362); Johnson Creek (46.306181, -122.579585); Sheep Canyon (46.206343, -122.268258); South Fork Toutle River (46.209387, -122.263037); Studebaker Creek (46.28238, -122.681733); Thirteen Creek (46.237634, -122.624229); Trouble Creek (46.182362, -122.387761); Twenty Creek (46.232994, -122.5836); North Fork Toutle River (46.328728, -122.722386); Whitten Creek (46.203701, -122.502013).

(vii) *East Willapa Watershed 1708000507*. Outlet(s) = Cowlitz River (46.265795, -122.915793); upstream to endpoint(s) in: Unnamed (46.241179, -122.990022); Unnamed (46.247733, -123.018044); Unnamed (46.247998, -122.777916); Unnamed (46.260464, -122.956364); Unnamed (46.263008, -123.020122); Unnamed (46.263983, -

122.930316); Unnamed (46.266093, -122.981616); Unnamed (46.27194, -122.770063);
Unnamed (46.281159, -122.760238); Unnamed (46.287658, -122.906283); Unnamed
(46.289048, -122.963514); Unnamed (46.302765, -123.0657); Unnamed (46.307415, -
122.93938); Unnamed (46.313054, -122.816361); Unnamed (46.314382, -122.943084);
Unnamed (46.314535, -123.010247); Unnamed (46.315942, -122.865345); Unnamed
(46.317235, -122.896545); Unnamed (46.319898, -122.814207); Unnamed (46.320644, -
122.892218); Unnamed (46.322067, -122.814053); Unnamed (46.32332, -122.859461);
Unnamed (46.323446, -122.886965); Unnamed (46.326968, -123.025803); Unnamed
(46.328758, -122.817082); Unnamed (46.329235, -122.909613); Unnamed (46.334118, -
122.817188); Unnamed (46.334241, -123.017807); Unnamed (46.336993, -122.893299);
Unnamed (46.337756, -122.611236); Unnamed (46.337802, -122.940117); Unnamed
(46.339026, -122.940678); Unnamed (46.343885, -122.762274); Unnamed (46.34681, -
122.946071); Unnamed (46.348905, -122.769029); Unnamed (46.349667, -123.053432);
Unnamed (46.350564, -122.799855); Unnamed (46.358221, -123.038147); Unnamed
(46.358277, -122.791338); Unnamed (46.3604, -122.696281); Unnamed (46.360599, -
122.736153); Unnamed (46.36403, -123.005163); Unnamed (46.36632, -122.634646);
Unnamed (46.366869, -122.89658); Unnamed (46.368123, -122.894117); Unnamed
(46.374172, -122.622494); Unnamed (46.375592, -123.099965); Unnamed (46.380427, -
122.610242); Unnamed (46.38163, -122.883768); Unnamed (46.38939, -123.065756);
Unnamed (46.394019, -122.98067); Unnamed (46.401297, -123.028366); Unnamed
(46.41997, -123.040973); Unnamed (46.428911, -123.047482); Unnamed (46.43562, -
123.045801); Unnamed (46.437797, -122.999776); Unnamed (46.460336, -123.01792);
Unnamed (46.472152, -122.999706); Unnamed (46.508924, -122.885928); Unnamed

(46.522845, -122.854611); Unnamed (46.534744, -122.980706); Unnamed (46.537092, -122.823206); Unnamed (46.543646, -122.855197); Arkansas Creek (46.334118, -123.054814); Baxter Creek (46.335963, -122.985106); Becker Creek (46.366541, -123.077711); Brim Creek (46.444408, -123.040408); Campbell Creek (46.345799, -123.069223); Cline Creek (46.339582, -122.856216); Cowlitz River (46.367511, -122.934945); Cowlitz River (46.280749, -122.908759); Cowlitz River (46.270301, -122.918872); Curtis Creek (46.479675, -122.978296); Delameter Creek (46.27323, -123.020718); Duffy Creek (46.436886, -122.972934); Ferrier Creek (46.469037, -122.92969); Hemlock Creek (46.258298, -122.728132); Hill Creek (46.385982, -122.887561); King Creek (46.528608, -123.017282); Monahan Creek (46.304091, -123.062738); North Fork Brim Creek (46.461931, -123.022977); North Fork Toutle River (46.366681, -122.587092); Olequa Creek (46.522827, -122.88994); Owens Creek (46.39917, -123.045965); Rock Creek (46.347737, -122.815672); Rock Creek (46.36466, -122.979025); Snow Creek (46.448627, -122.9822); Stankey Creek (46.325726, -122.827854); Stillwater Creek (46.376492, -123.114458); Sucker Creek (46.257038, -122.763973); Toutle River (46.329223, -122.725131); Tucker Creek (46.256345, -123.017401); Whittle Creek (46.313257, -122.951576); Unnamed Creek (46.365968, -123.078372); Unnamed Creek (46.366574, -122.6278); Unnamed Creek (46.322752, -122.727564); Unnamed Creek (46.358525, -122.749069); Wyant Creek (46.348562, -122.655808).

(viii) *Coweeman Watershed 1708000508*. Outlet(s) = Cowlitz River (Lat 46.09677, Long -122.917179); Owl Creek (46.076672, -122.869072); upstream to endpoint(s) in: Unnamed (46.07177, -122.861942); Unnamed (46.080968, -122.726324);

Unnamed (46.082482, -122.722033); Unnamed (46.08384, -122.719656); Unnamed
 (46.103901, -122.735682); Unnamed (46.11823, -122.725869); Unnamed (46.128746, -
 122.897993); Unnamed (46.133211, -122.702488); Unnamed (46.134412, -122.877742);
 Unnamed (46.134559, -122.874501); Unnamed (46.137294, -122.570127); Unnamed
 (46.140549, -122.616015); Unnamed (46.142157, -122.858404); Unnamed (46.142862, -
 122.813885); Unnamed (46.143869, -122.609969); Unnamed (46.147673, -122.866141);
 Unnamed (46.151541, -122.875978); Unnamed (46.157716, -122.6488); Unnamed
 (46.162608, -122.527406); Unnamed (46.164373, -122.573871); Unnamed (46.16697, -
 122.62965); Unnamed (46.169603, -122.912787); Unnamed (46.173346, -122.82947);
 Unnamed (46.174933, -122.844098); Unnamed (46.175151, -122.934081); Unnamed
 (46.175276, -122.532665); Unnamed (46.175583, -122.668586); Unnamed (46.180534, -
 122.898644); Unnamed (46.181396, -122.766774); Unnamed (46.183838, -122.820311);
 Unnamed (46.188804, -122.78364); Unnamed (46.193597, -122.911471); Unnamed
 (46.196887, -122.713022); Unnamed (46.20058, -122.827779); Unnamed (46.201892, -
 122.695345); Unnamed (46.202726, -122.560647); Unnamed (46.213243, -122.666442);
 Unnamed (46.217243, -122.951394); Unnamed (46.219673, -122.838549); Unnamed
 (46.220679, -122.889953); Unnamed (46.223168, -122.968869); Unnamed (46.226103, -
 122.771549); Unnamed (46.226208, -122.803239); Unnamed (46.237678, -122.887353);
 Unnamed (46.242901, -122.885918); Baird Creek (46.194037, -122.549476); Brown
 Creek (46.138569, -122.581603); Butler Creek (46.148896, -122.518149); Coweeman
 River (46.150297, -122.51847); Cowlitz River (46.265795, -122.915793); Goble Creek
 (46.109525, -122.68388); Hill Creek (46.178271, -122.600223); Jim Watson Creek
 (46.177642, -122.74165); Leckler Creek (46.231526, -122.948175); Little Baird Creek

(46.190281, -122.572141); Mulholland Creek (46.201136, -122.646167); Nineteen Creek (46.140604, -122.623774); North Fork Goble Creek (46.136853, -122.680068); Nye Creek (46.121737, -122.805205); Ostrander Creek (46.210956, -122.764306); Owl Creek (46.091102, -122.865692); Owl Creek (46.076526, -122.861672); Salmon Creek (46.254572, -122.885114); Sam Smith Creek (46.165941, -122.725633); Sandy Bend Creek (46.231734, -122.915112); Skipper Creek (46.169104, -122.577264); South Fork Ostrander Creek (46.184505, -122.826132); Turner Creek (46.116534, -122.816196).

(7) Lower Columbia Subbasin 17080006—(i) *Youngs River Watershed*

1708000601. Outlet(s) = Lewis and Clark River (Lat 46.157276, Long -123.8567); Adair Slough (46.164573, -123.890158); Youngs River (46.168659, -123.838128); Skipanon Waterway (46.183693, -123.907231); Alder Creek (46.183694, -123.923138); upstream to endpoint(s) in: Unnamed (45.961144, -123.760693); Unnamed (45.975677, -123.784472); Unnamed (45.987168, -123.864135); Unnamed (46.075646, -123.74625); Unnamed (46.074307, -123.722161); Unnamed (46.081494, -123.687949); Unnamed (46.098839, -123.782036); Unnamed (46.101257, -123.777885); Unnamed (46.101582, -123.791448); Unnamed (46.104561, -123.790689); Unnamed (46.105278, -123.778981); Unnamed (46.115179, -123.862193); Unnamed (46.11823, -123.798015); Unnamed (46.125146, -123.900778); Unnamed (46.133731, -123.821982); Unnamed (46.155148, -123.772037); Unnamed (46.163155, -123.798112); Unnamed (45.956438, -123.752083); Unnamed (45.992690, -123.779916); Unnamed (46.079767, -123.848993); Unnamed (46.081156, -123.752043); Unnamed (46.098781, -123.713321); Unnamed (46.11386, -123.748487); Abercrombie Creek (46.087084, -123.88937); Adair Slough (46.153356, -123.897783); Alder Creek (46.171207, -123.933132); Barrett Slough (46.12204, -

123.85348); Binder Creek (46.142527, -123.821985); Binder Slough (46.121358, -123.819543); Brown Creek (46.172014, -123.806343); Casey Slough (46.115066, -123.815982); Cullaby Slough (46.022576, -123.880488); Green Slough (46.124806, -123.869053); Heckard Creek (46.057636, -123.87837); Hortill Creek (46.056683, -123.839636); Jeffers Slough (46.14965, -123.85163); Johnson Slough (46.071237, -123.882259); Klickitat Creek (46.049861, -123.842997); Lewis and Clark River (45.953527, -123.731398); Little Wallooskee River (46.140199, -123.737638); Loowit Creek (46.022396, -123.832364); Middle Fork North Fork Klaskanine River (46.061237, -123.638614); Moosmoos Creek (46.074807, -123.777539); North Fork Klaskanine River (46.048838, -123.636273); North Fork North Fork Klaskanine River (46.097739, -123.674883); Peterson Slough (46.10793, -123.85242); Shweeash Creek (46.019839, -123.839507); South Fork Klaskanine River (46.048461, -123.713622); South Fork Lewis and Clark River (45.981399, -123.841473); Speelyai Creek (46.032437, -123.83321); Stowebolt Creek (46.060439, -123.825132); Tucker Creek (46.075512, -123.824939); Wallooskee River (46.104416, -123.699695); Youngs River (46.06718, -123.789692).

(ii) *Big Creek Watershed 1708000602*. Outlet(s) = Hillcrest Creek (Lat 46.171377, Long -123.655493); Bear Creek (46.1716, -123.665605); Marys Creek (46.173116, -123.668452); Fertile Valley Creek (46.188744, -123.588332); Blind Slough (46.20114, -123.584906); Big Creek (46.184561, -123.596303); John Day River (46.181573, -123.7404); Little Ferris Creek (46.158288, -123.629531); Mill Creek (46.19298, -123.759637); upstream to endpoint(s) in: Unnamed (46.067847, -123.49896); Unnamed (46.155656, -123.731589); Unnamed (46.176667, -123.477624); Unnamed (46.180584, -123.796858); Unnamed (46.199516, -123.501455); Unnamed (46.211835, -

123.534242); Unnamed (46.213817, -123.557667); Unnamed (46.219749, -123.496059); Unnamed (46.183645, -123.484347); Bear Creek (46.122269, -123.636516); Big Creek (46.068744, -123.477937); Big Noise Creek (46.160378, -123.50188); Blind Slough (46.230154, -123.5256); Coon Creek (46.072977, -123.551698); Davis Creek (46.193487, -123.48968); Elk Creek (46.057446, -123.531954); Fertile Valley Creek (46.180229, -123.574191); McNary Creek (46.131584, -123.45871); Grizzly Slough (46.209179, -123.551962); Hillcrest Creek (46.155615, -123.633555); John Day River (46.151824, -123.718295); Gnat Creek (46.134382, -123.492375); Little Bear Creek (46.11197, -123.661934); Little Creek (46.138483, -123.606302); Marys Creek (46.136519, -123.685932); Mill Creek (46.143237, -123.582679); Mud Creek (46.089977, -123.55188); Pigpen Creek (46.102416, -123.559042); Saspal Slough (46.213023, -123.5376); Supply Creek (46.163644, -123.538404).

(iii) *Grays Bay Watershed 1708000603*. Outlet(s) = Unnamed (Lat 46.242128, Long -123.884815); Unnamed (46.242369, -123.889547); Unnamed (46.246062, -123.909891); Unnamed (46.249228, -123.863946); Unnamed (46.259183, -123.852059); Unnamed (46.260409, -123.850081); Unnamed (46.261711, -123.842086); Unnamed (46.269817, -123.830183); Crooked Creek (46.296355, -123.677056); Sisson Creek (46.301761, -123.72555); Chinook River (46.303571, -123.968574); Grays River (46.306824, -123.685025); Deep River (46.310771, -123.714286); Wallacut River (46.315209, -124.020283); upstream to endpoint(s) in: Unnamed (46.252832, -123.906587); Unnamed (46.255601, -123.883337); Unnamed (46.257057, -123.892766); Unnamed (46.261834, -123.877718); Unnamed (46.26971, -123.872478); Unnamed (46.272099, -123.863261); Unnamed (46.272788, -123.855154); Unnamed (46.273099, -

123.847441); Unnamed (46.273923, -123.833921); Unnamed (46.27462, -123.841297);
Unnamed (46.282558, -123.76132); Unnamed (46.289926, -123.938085); Unnamed
(46.296119, -123.751262); Unnamed (46.305607, -123.945919); Unnamed (46.320823, -
123.638104); Unnamed (46.332306, -123.674913); Unnamed (46.349054, -123.563997);
Unnamed (46.362133, -123.397387); Unnamed (46.367197, -123.661101); Unnamed
(46.370018, -123.661652); Unnamed (46.383643, -123.54663); Unnamed (46.3861, -
123.399009); Unnamed (46.389563, -123.443531); Unnamed (46.398896, -123.603127);
Unnamed (46.409223, -123.563384); Unnamed (46.40988, -123.591182); Unnamed
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123.465561); Unnamed (46.427724, -123.449351); Unnamed (46.428912, -123.389161);
Unnamed (46.429717, -123.393596); Unnamed (46.429964, -123.55265); Unnamed
(46.432969, -123.434984); Unnamed (46.435352, -123.530908); Unnamed (46.440181, -
123.389495); Unnamed (46.440236, -123.539966); Unnamed (46.445599, -123.389398);
Unnamed (46.453434, -123.501054); Unnamed (46.466604, -123.486435); Unnamed
(46.472739, -123.394404); Unnamed (46.478038, -123.431439); Beaver Creek
(46.401593, -123.550548); Blaney Creek (46.403572, -123.442837); Cabin Creek
(46.44222, -123.485741); Campbell Creek (46.358257, -123.709343); Chinook River
(46.274479, -123.902553); Crooked Creek (46.313288, -123.59644); Deep River
(46.354054, -123.688621); East Fork Grays River (46.42414, -123.36983); Empi Creek
(46.31383, -123.638514); Fossil Creek (46.354523, -123.484306); Grays River
(46.491024, -123.4354); Hendrickson Canyon (46.373524, -123.664774); Hendrickson
Creek (46.361368, -123.655366); Honey Creek (46.375646, -123.603913); Hull Creek
(46.405494, -123.57846); Impie Creek (46.318309, -123.617177); Johnson Creek

(46.463847, -123.502087); Kessel Creek (46.33321, -123.586047); King Creek (46.34008, -123.577604); Klints Creek (46.352885, -123.546067); Lassila Creek (46.330703, -123.717849); Malone Creek (46.362725, -123.638537); Mitchell Creek (46.457074, -123.405992); North Fork South Fork Crooked Creek (46.302415, -123.588653); Rangila Slough (46.379454, -123.663919); Salme Creek (46.345311, -123.727176); Seal Creek (46.330013, -123.666112); Shannon Creek (46.397758, -123.544779); Silver Creek (46.361718, -123.606566); Sisson Creek (46.326508, -123.744171); South Creek (46.298871, -123.634124); South Fork Crooked Creek (46.291379, -123.594068); South Fork Grays River (46.378555, -123.338976); Sweigiler Creek (46.421912, -123.519244); Thadbar Creek (46.338413, -123.617861); Wallacut River (46.320188, -124.009121); West Fork Grays River (46.45098, -123.56517); Unnamed Creek (46.30366, -123.59053).

(8) Clackamas Subbasin 17090011—(i) *Collawash River Watershed*

1709001101. Outlet(s) = Collawash River (Lat 45.032022, Long -122.061189); upstream to endpoint(s) in: Collawash River (44.950761, -122.036265); Fan Creek (44.990371, -122.070099); Farm Creek (44.964523, -122.056455); Hot Springs Fork (44.938225, -122.172924); Nohorn Creek (44.951768, -122.178914); Pansy Creek (44.961276, -122.142173); Thunder Creek (44.971026, -122.114357).

(ii) *Upper Clackamas River Watershed 1709001102*. Outlet(s) = Clackamas River (Lat 45.032073, Long -122.060326); upstream to endpoint(s) in: Unnamed (44.921586, -121.891779); Unnamed (44.946758, -121.870376); Unnamed (44.965941, -121.890584); Unnamed (44.984829, -121.88591); Unnamed (45.00955, -121.913461); Unnamed (45.009742, -121.911448); Berry Creek (44.842515, -121.913476); Clackamas River

(44.872157, -121.84842); Cub Creek (44.840609, -121.886756); Fawn Creek (44.918888, -121.906568); Hunter Creek (44.892373, -121.929425); Kansas Creek (44.983299, -121.898876); Last Creek (44.971428, -121.855763); Lowe Creek (44.950581, -121.911761); Pinhead Creek (44.947076, -121.856905); Pot Creek (45.018321, -121.903626); Rhododendron Creek (44.935961, -121.905497); Wall Creek (44.954634, -121.88565); Wolf Creek (45.009327, -121.896447); Unnamed Creek (44.939221, -121.896788).

(iii) *Oak Grove Fork Clackamas River Watershed 1709001103*. Outlet(s) = Oak Grove Fork Clackamas River (Lat 45.074631, Long -122.053402); upstream to endpoint(s) in: Oak Grove Fork Clackamas River (45.082079, -121.987346); Pint Creek (45.083562, -122.037835).

(iv) *Middle Clackamas River Watershed 1709001104*. Outlet(s) = Clackamas River (Lat 45.243027, Long -122.28019); upstream to endpoint(s) in: Big Creek (45.071509, -122.07317); Clackamas River (45.032073, -122.060326); Fish Creek (45.063717, -122.160481); North Fork Clackamas River (45.238149, -122.218497); Oak Grove Fork Clackamas River (45.074631, -122.053402); Mag Creek (45.058467, -122.049959); Roaring River (45.181144, -122.060589); Sandstone Creek (45.088154, -122.075766); South Fork Clackamas River (45.193817, -122.226266); Tag Creek (45.060352, -122.048674); Tar Creek (45.049246, -122.058186); Trout Creek (45.037826, -122.073273); Wash Creek (45.047152, -122.190238); Whale Creek (45.110262, -122.085444).

(v) *Eagle Creek Watershed 1709001105*. Outlet(s) = Eagle Creek (Lat 45.353023, Long -122.38235); upstream to endpoint(s) in: Unnamed (45.306541, -122.253481); Bear

Creek (45.333888, -122.257969); Currin Creek (45.337212, -122.357579); Delph Creek (45.266726, -122.169986); Eagle Creek (45.276382, -122.200963); Little Eagle Creek (45.301454, -122.167019); North Fork Eagle Creek (45.315132, -122.116618); Trout Creek (45.330806, -122.124752).

(vi) *Lower Clackamas River Watershed 1709001106*. Outlet(s) = Clackamas River (Lat 45.372568, Long -122.607652); upstream to endpoint(s) in: Unnamed (45.258538, -122.299446); Unnamed (45.350086, -122.487187); Unnamed (45.367637, -122.306895); Unnamed (45.377873, -122.36847); Unnamed (45.405591, -122.323467); Unnamed (45.411148, -122.302642); Bargfeld Creek (45.319393, -122.440978); Clackamas River (45.243027, -122.28019); Clear Creek (45.202385, -122.314579); Deep Creek (45.341779, -122.281223); Foster Creek (45.377099, -122.440414); Goose Creek (45.361912, -122.356092); Little Clear Creek (45.194779, -122.32996); Little Clear Creek (45.279953, -122.406729); Mosier Creek (45.268224, -122.452581); North Fork Deep Creek (45.426893, -122.304417); Richardson Creek (45.409345, -122.450358); Rock Creek (45.41554, -122.502566); Tickle Creek (45.391446, -122.27456).

(9) Lower Willamette Subbasin 17090012—(i) *Johnson Creek Watershed 1709001201*. Outlet(s) = Johnson Creek (Lat 45.443607, Long -122.646568); upstream to endpoint(s) in: Unnamed (45.395793, -122.637786); Unnamed (45.479793, -122.637275); Unnamed (45.400038, -122.643353); Unnamed (45.427915, -122.679059); Unnamed (45.482333, -122.416496); Unnamed (45.483664, -122.416638); Unnamed (45.485757, -122.422255); Unnamed (45.490889, -122.423876); Badger Creek (45.459757, -122.386165); Crystal Springs Creek (45.481991, -122.636282); Hogan Creek (45.479786, -122.417896); Johnson Creek (45.462435, -122.305859); Kellogg

Creek (45.416585, -122.599025); Kelly Creek (45.467217, -122.484045); Mount Scott Creek (45.430427, -122.557033); Oswego Creek (45.410712, -122.662215); Sunshine Creek (45.462297, -122.398193); Tryon Creek (45.453787, -122.691186); Willamette River (45.372568, -122.607652)).

(ii) *Scappoose Creek Watershed 1709001202*. Outlet(s) = Multnomah Channel (Lat 45.618917, Long -122.796356); Multnomah Channel (45.856115, -122.795022); upstream to endpoint(s) in: Brush Creek (45.811623, -122.98903); Cox Creek (45.857229, -122.945231); Dart Creek (45.880546, -122.886563); Deep Creek (45.789148, -122.918002); Fall Creek (45.80123, -122.93963); Gourlay Creek (45.725088, -122.960632); Lazy Creek (45.745352, -122.992007); Lizzie Creek (45.824543, -122.994287); McCarthy Creek (45.616212, -122.859047); McNulty Creek (45.836482, -122.859642); Miller Creek (45.611495, -122.812947); Milton Creek (45.910301, -122.975949); North Scappoose Creek (45.826402, -123.0147); Raymond Creek (45.72705, -122.929237); Salmon Creek (45.867532, -122.901361); Scappoose Bay (45.790852, -122.876349); South Scappoose Creek (45.76167, -123.011604); Sturgeon Lake (45.72323, -122.79232); Sturgeon Lake (45.749815, -122.802752); Sturgeon Lake (45.725503, -122.830343); Wolf Creek (45.746648, -122.949214).

(iii) *Columbia Slough/Willamette River Watershed 1709001203*. Outlet(s) = Willamette River (Lat 45.653521, Long -122.764965); upstream to endpoint(s) in: Swan Island Basin (45.565019, -122.713073); Columbia Slough (45.583522, -122.647913); Unnamed (45.615235, -122.740691); Unnamed (45.627985, -122.754739); Willamette River (45.372568, -122.607652).

(10) Lower Columbia River Corridor—Lower Columbia River Corridor.Outlet(s)
= Columbia River (Lat 46.2485, Long -124.0782) upstream to endpoint(s) in: Columbia
River (Lat 45.605237, Long -121.633264).

(11) Maps of proposed critical habitat for the lower Columbia River coho salmon
DPS follow:

Map of the Lower Columbia River Coho ESU



Area of Detail

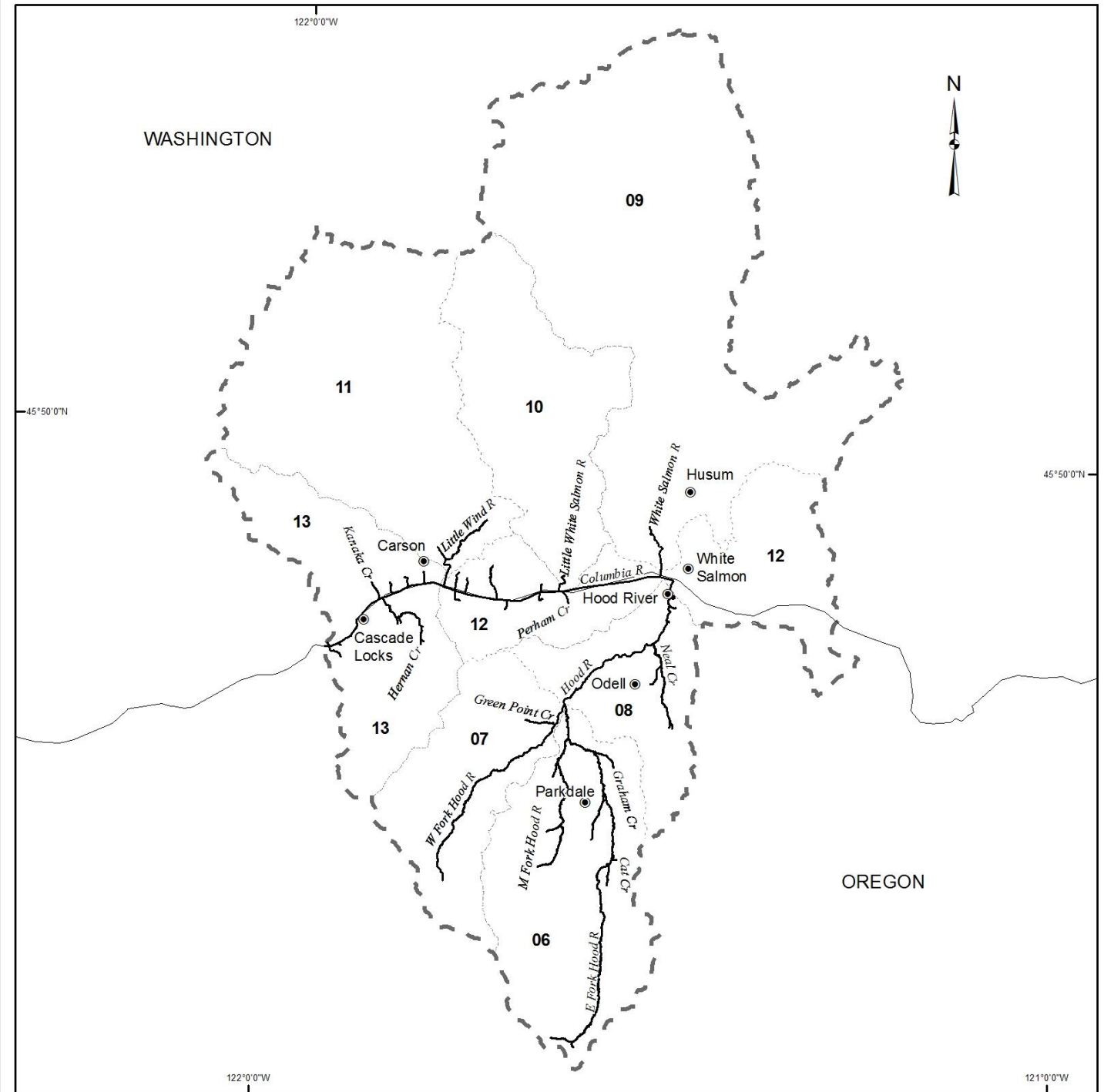
Legend

- State Boundaries
- Subbasin Boundaries



**Final Critical Habitat for the
Lower Columbia River Coho ESU**

**Middle Columbia-Hood Subbasin
17070105**



● Cities

□ State Boundaries

~ Critical Habitat

⋯ Watershed Boundary

- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17070105, watershed = 1707010501)

0 2.75 5.5 11 16.5 Kilometers

0 2.75 5.5 11 16.5 Miles

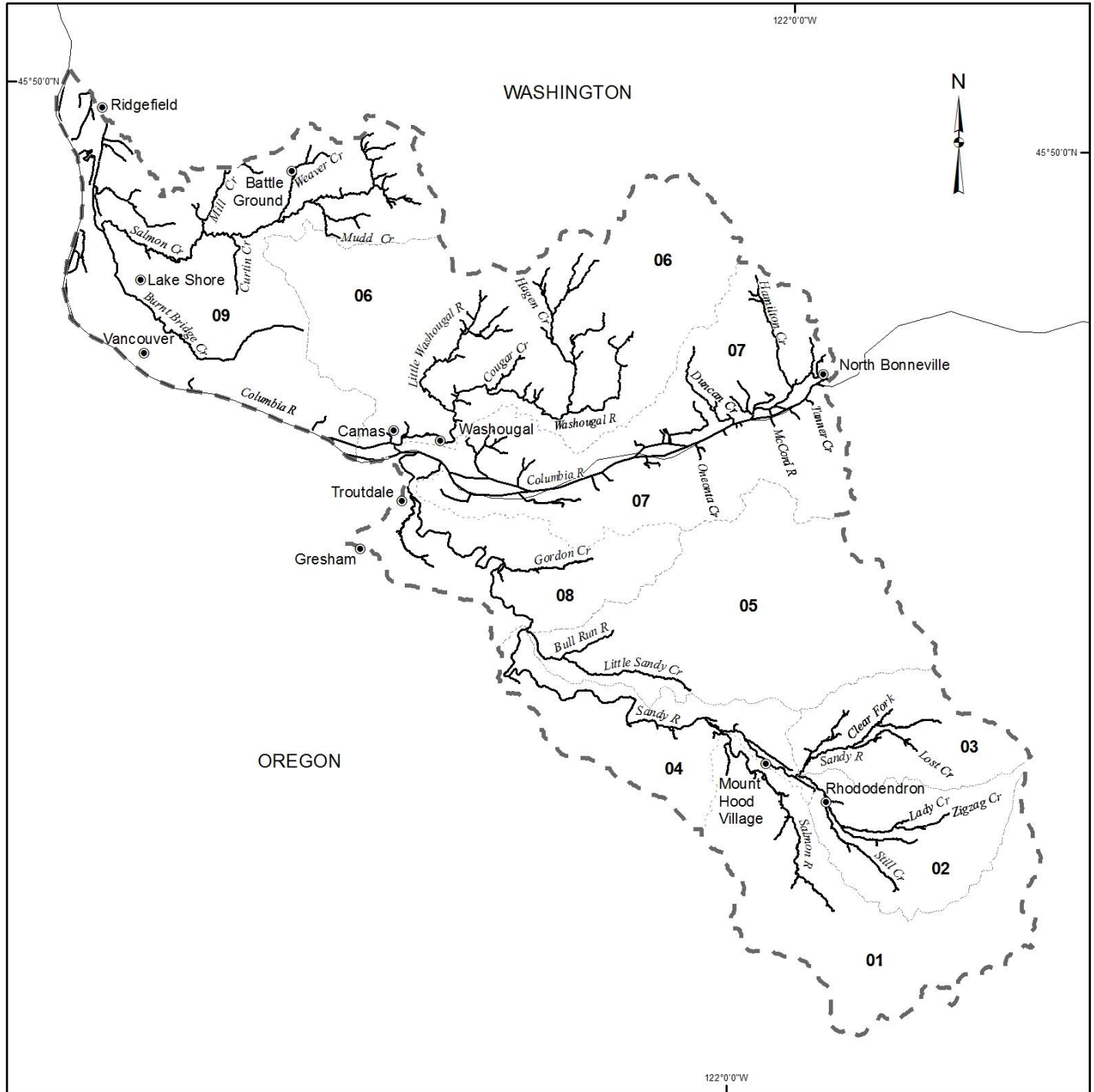
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Lower Columbia River Coho ESU

Lower Columbia-Sandy Subbasin
17080001



● Cities

□ State Boundaries

— Critical Habitat

- - - Watershed Boundary

- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17080001, watershed = 1708000101)

0 2.5 5 10 15
Kilometers

0 2.5 5 10 15
Miles

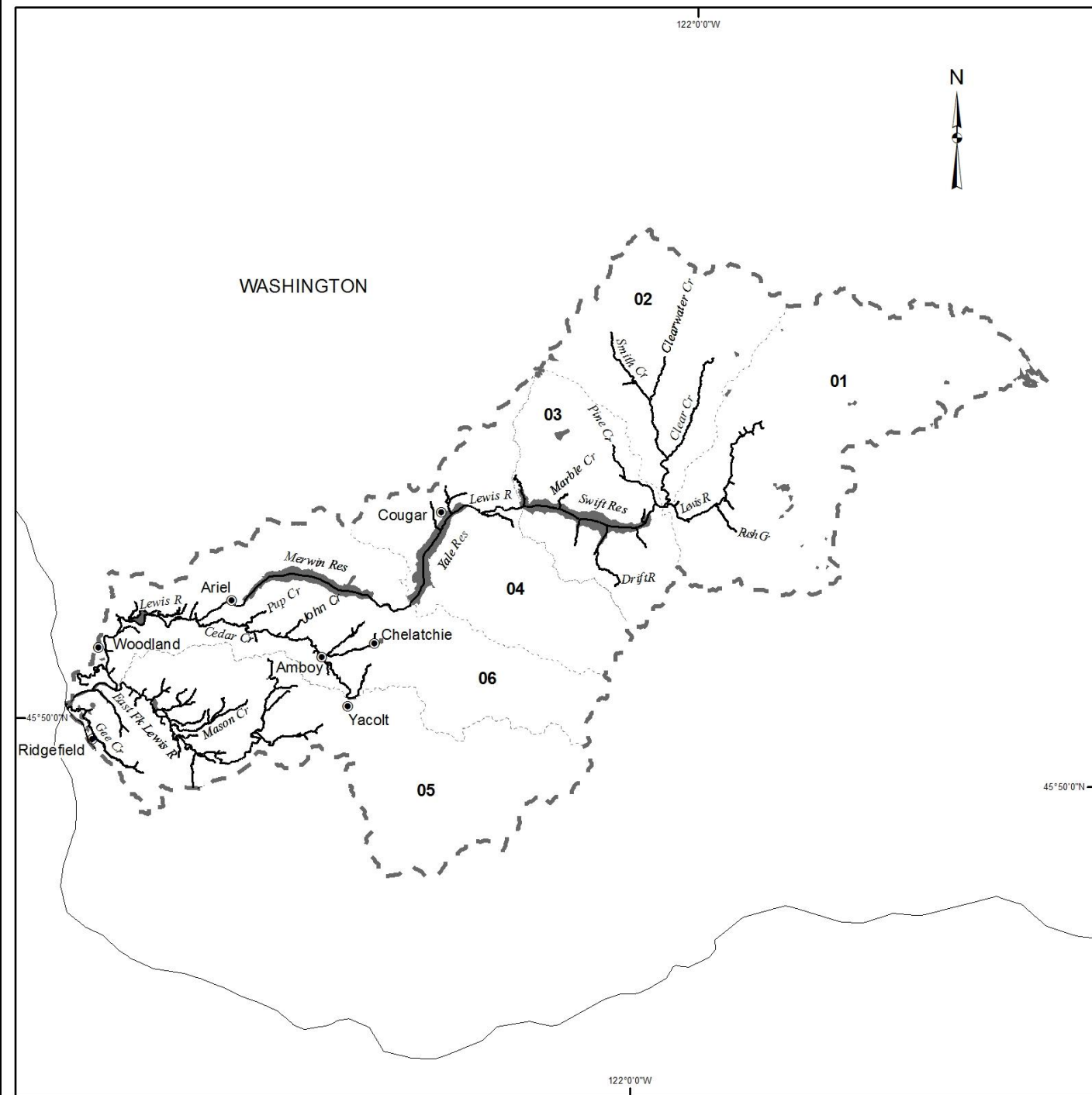
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

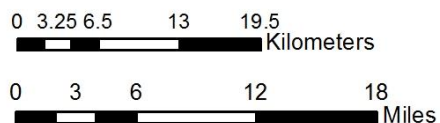
**Final Critical Habitat for the
Lower Columbia River Coho ESU**

**Lewis Subbasin
17080002**



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- ⋯ Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17080002, watershed = 1708000201)



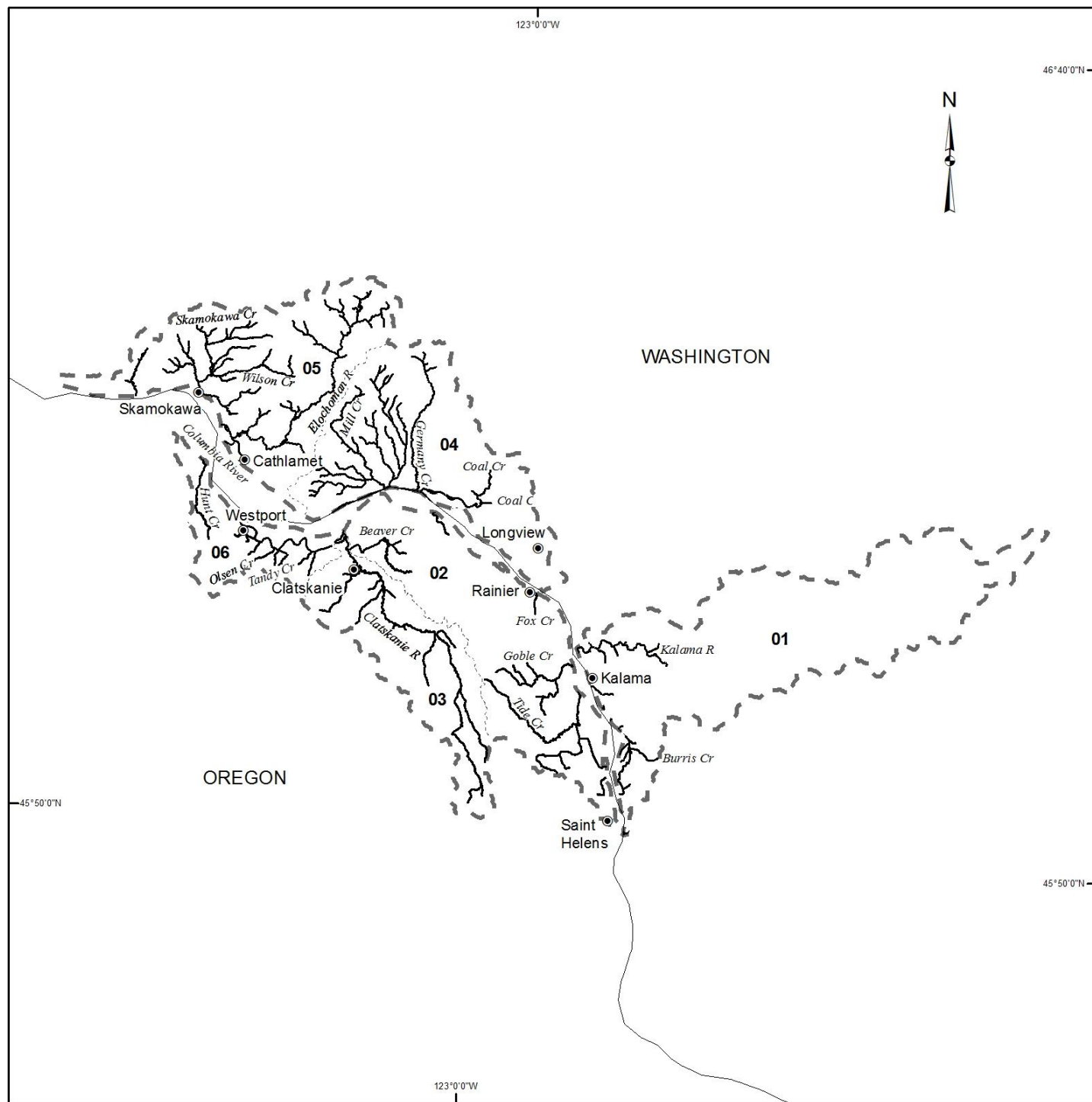
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

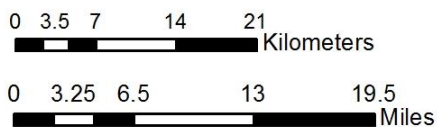
Final Critical Habitat for the Lower Columbia River Coho ESU

Lower Columbia-Clatskanie Subbasin
17080003



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17080003, watershed = 1708000301)



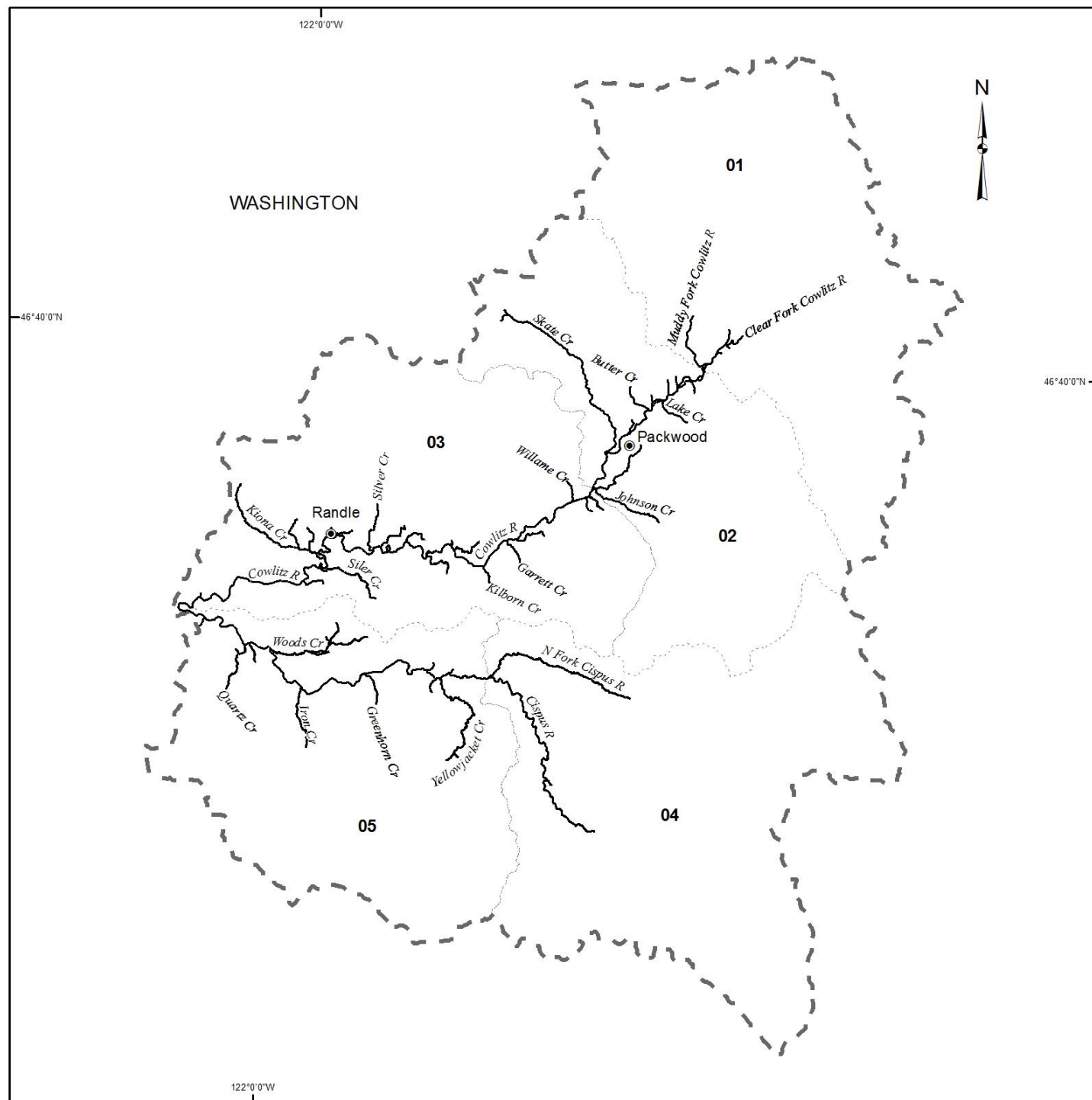
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

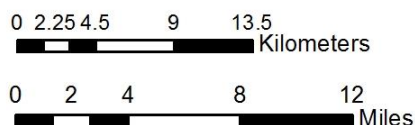
Final Critical Habitat for the Lower Columbia River Coho ESU

Upper Cowlitz Subbasin
17080004



- Cities
- State Boundaries
- ~ Critical Habitat
- ... Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17080004, watershed = 1708000401)



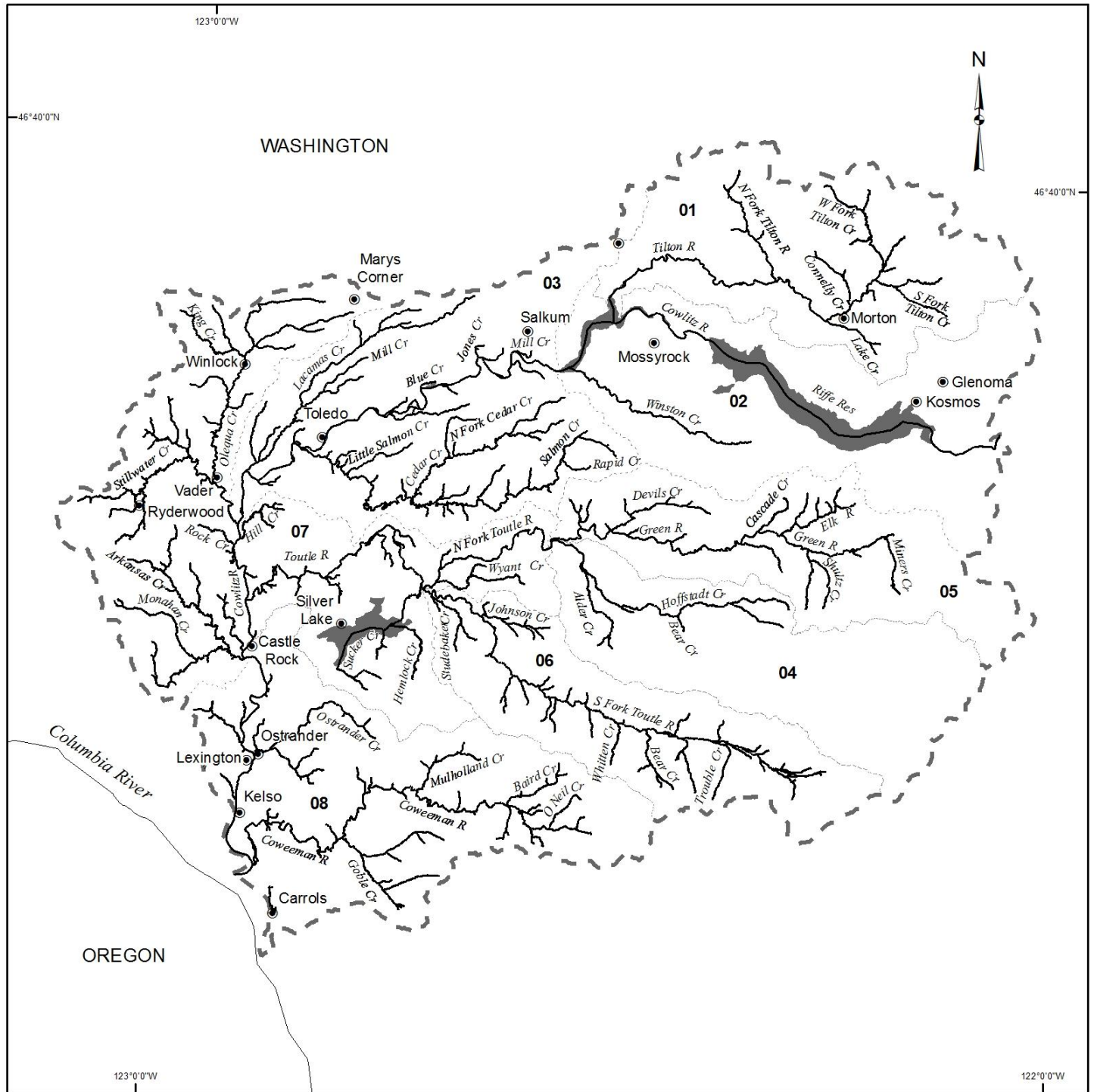
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Lower Columbia River Coho ESU

**Cowlitz Subbasin
17080005**



- Cities
- State Boundaries
- Critical Habitat
- ... Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17080005, watershed = 1708000501)

0 2.254.5 9 13.5
Kilometers

0 2.5 5 10 15
Miles

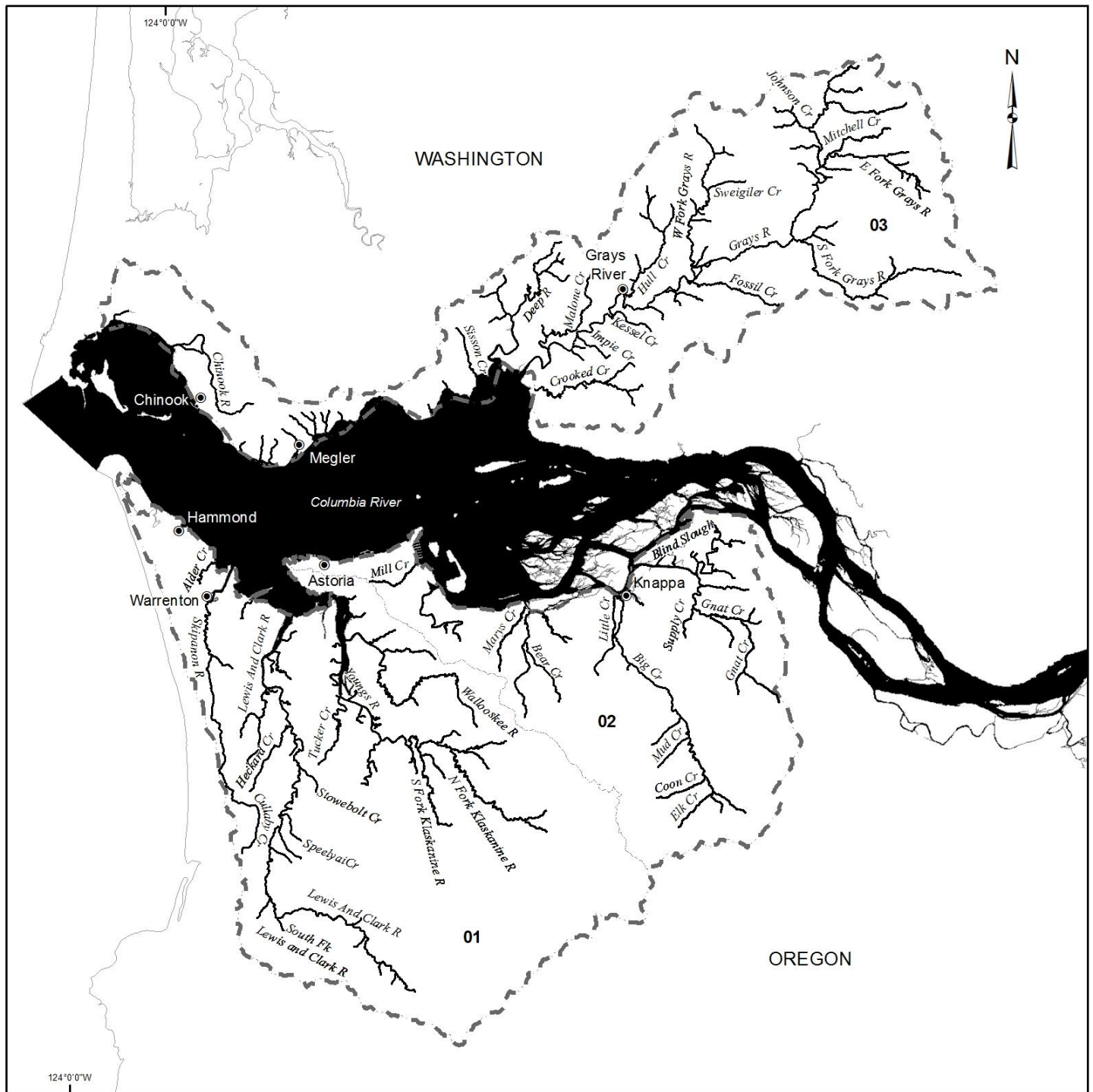
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Lower Columbia River Coho ESU

Lower Columbia Subbasin
17080006

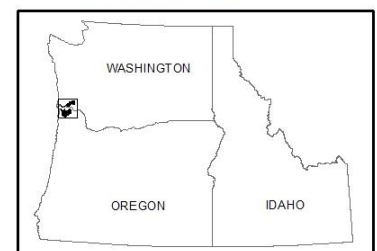


- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17080006, watershed = 1708000601)



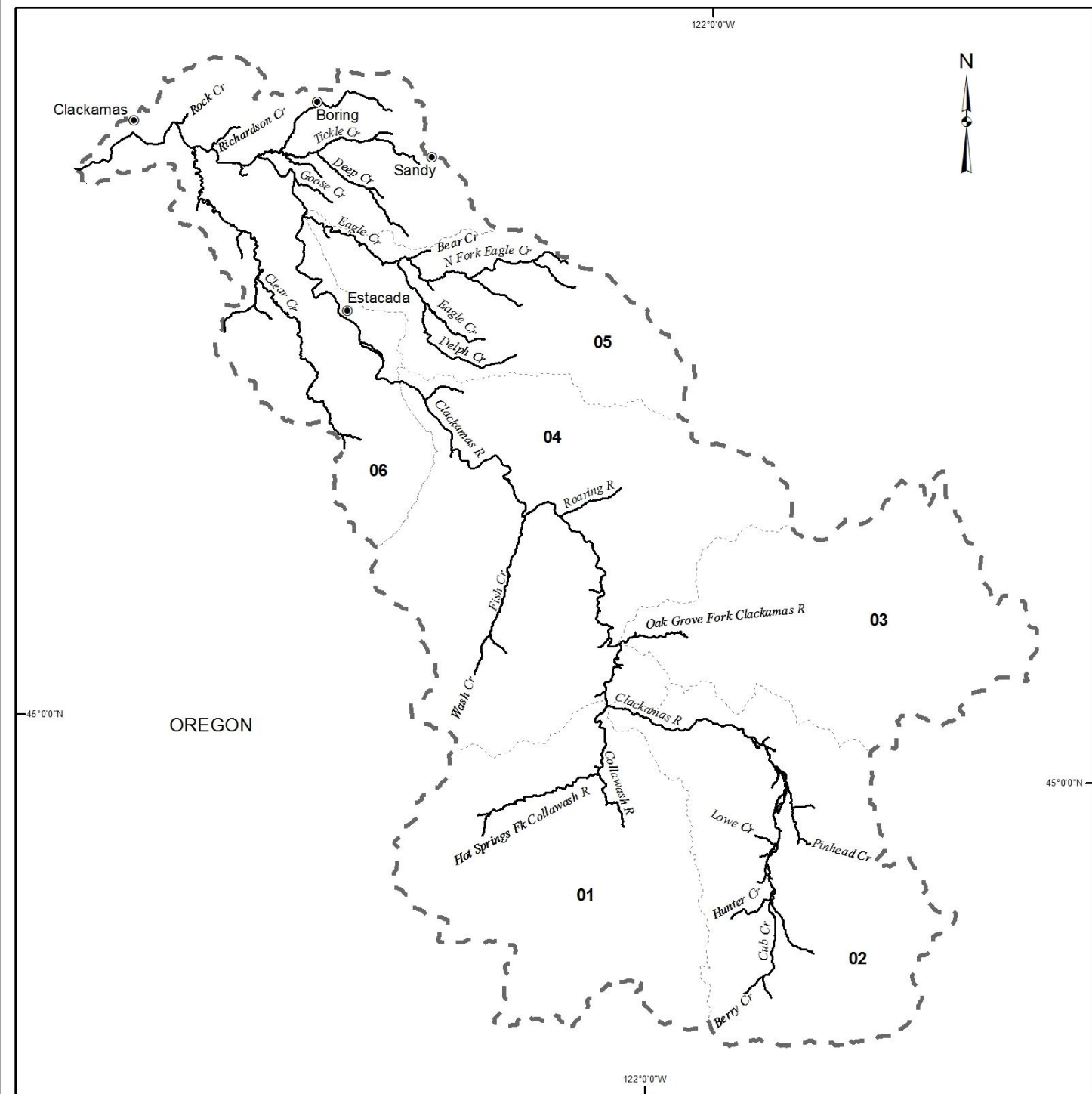
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Lower Columbia River Coho ESU

Clackamas Subbasin
17090011



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17090011, watershed = 1709001101)



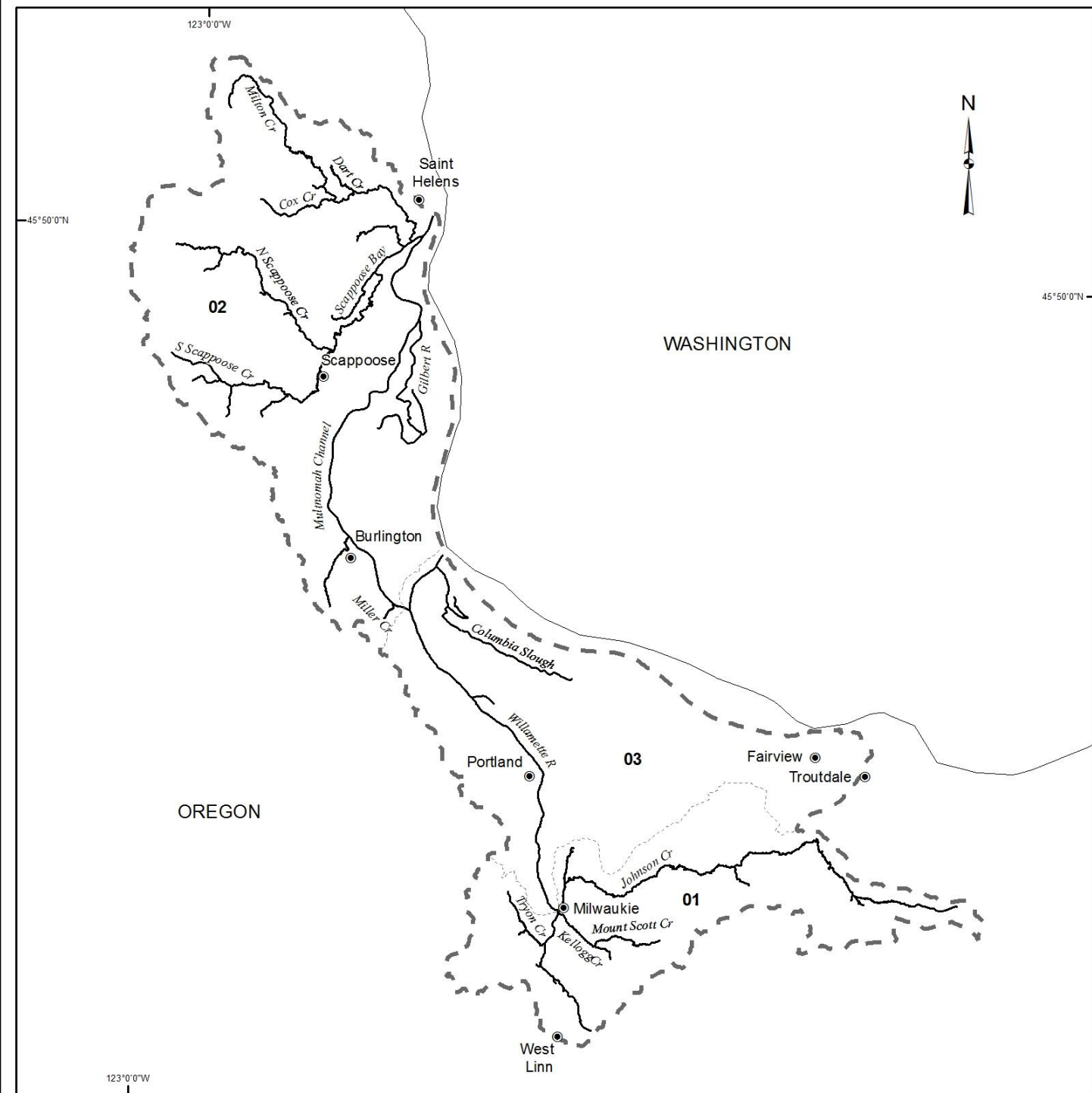
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Lower Columbia River Coho ESU

Lower Willamette Subbasin
17090012



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17090012, watershed = 1709001201)

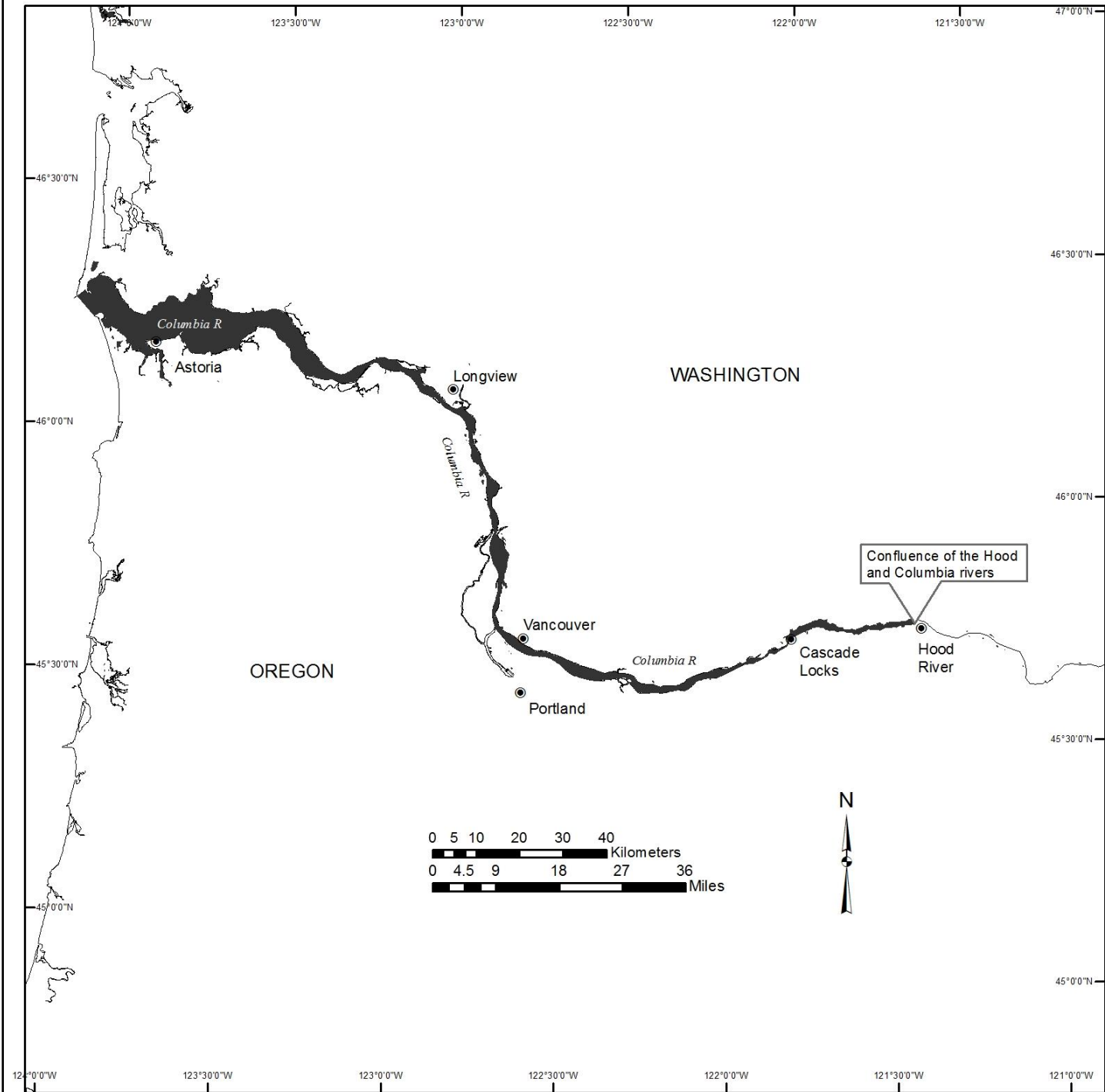


Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

**Columbia River Rearing / Migration Corridor
for the Lower Columbia River Coho ESU**



Legend

- Cities
- Critical Habitat
- State Boundaries

Lower Columbia River Coho ESU

Lower Columbia River Corridor
The lower Columbia River corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to the confluence with the Hood River (Oregon).

(u) *Puget Sound Steelhead (Oncorhynchus mykiss)*. Critical habitat is designated to include the areas defined in the following subbasins:

(1) Strait Of Georgia Subbasin 17110002—(i) *Bellingham Bay 1711000201*.

Outlet(s) = Chuckanut Creek (Lat 48.700204, Long -122.4949); Colony Creek (48.596632, -122.419321); Padden Creek (48.720212, -122.507267); Squalicum Creek (48.761135, -122.508464); Unnamed (48.614316, -122.441055); Whatcom Creek (48.754617, -122.482672); upstream to endpoint(s) in: Chuckanut Creek (48.695855, -122.459009); Colony Creek (48.595012, -122.368655); Padden Creek (48.716119, -122.492112); Squalicum Creek (48.800413, -122.401884); Toad Creek (48.790221, -122.420404); Unamed (48.61781, -122.439544); Unnamed (48.694566, -122.460342); Unnamed (48.749891, -122.443697); Unnamed (48.776621, -122.485934); Unnamed (48.798187, -122.478488); Unnamed (48.804196, -122.480665); Unnamed (48.808622, -122.395832); Unnamed (48.81125, -122.390305); Unnamed (48.818485, -122.394634); Whatcom Creek (48.755728, -122.439609).

(ii) *Samish River Watershed 1711000202*. Outlet(s) = Samish River (Lat 48.554929, Long -122.456811); upstream to endpoint(s) in: Bear Creek (48.636953, -122.378411); Butler Creek (48.604896, -122.321047); Doolittle Creek (48.636011, -122.217771); Dry Creek (48.59728, -122.276992); Ennis Creek (48.656411, -122.192383); Friday Creek (48.648567, -122.371833); Parson Creek (48.601221, -122.282987); Silver Creek (48.64571, -122.329513); Swede Creek (48.558933, -122.226206); Thomas Creek (48.547551, -122.26923); Thunder Creek (48.597861, -122.214046); Unnamed (48.547031, -122.265845); Unnamed (48.601928, -122.266484); Unnamed (48.60898, -122.23177); Unnamed (48.624483, -122.220011); Unnamed

(48.635349, -122.312454); Unnamed (48.636660, -122.376452); Unnamed (48.684736, -122.198027); Vernon Creek (48.592764, -122.243096).

(iii) *Birch Bay 1711000204*. Outlet(s) = California Creek (Lat 48.96192, Long -122.732814); Dakota Creek (48.971842, -122.723798); Terrell Creek (48.921475, -122.745208); Unnamed (48.937195, -122.752893); upstream to endpoint(s) in: California Creek (48.894356, -122.608319); Haynie Creek (48.991982, -122.649909); North Fork Dakota Creek (48.984477, -122.568636); South Fork Dakota Creek (48.946745, -122.620945); Terrell Creek (48.873999, -122.688964); Unnamed (48.89583, -122.753422); Unnamed (48.937989, -122.750521); Unnamed (48.971309, -122.626164); Unnamed (48.975408, -122.668197); Unnamed (48.984629, -122.692849); Unnamed (48.986989, -122.701077); Unnamed (48.992777, -122.604054).

(2) Nooksack Subbasin 17110004—(i) *Upper North Fork Nooksack River Watershed 1711000401*. Outlet(s) = Canyon Creek (Lat 48.90661, Long -121.989864); North Fork Nooksack River (48.90561, -121.987814); upstream to endpoint(s) in: Canyon Creek (48.922933, -121.966384); Cascade Creek (48.898964, -121.863499); Cornell Creek (48.88507, -121.95911); Deadhorse Creek (48.902507, -121.837147); Gallop Creek (48.883100, -121.947200); Glacier Creek (48.831251, -121.903097); Hedrick Creek (48.89601, -121.971728); Little Creek (48.882629, -121.937123); North Fork Nooksack River (48.905296, -121.8089); Thompson Creek (48.892411, -121.880668); West Cornell Creek (48.882149, -121.967178); Unnamed (48.83788, -121.90421); Unnamed (48.844181, -121.897301); Unnamed (48.891500, -121.967668); Unnamed (48.902338, -121.849472); Unnamed (48.90707, -121.83948).

(ii) *Middle Fork Nooksack River Watershed 1711000402*. Outlet(s) = Canyon Creek (Lat 48.835008, Long -122.153051); Middle Fork Nooksack River (48.833037, -122.153128); upstream to endpoint(s) in: Canyon Creek (48.841923, -122.103727); Heislars Creek (48.778707, -122.092743); Middle Fork Nooksack River (48.771145, -122.072977); Porter Creek (48.794092, -122.103694); Unnamed (48.779218, -122.121048); Unnamed (48.780767, -122.116975); Unnamed (48.787472, -122.12477); Unnamed (48.820768, -122.122144).

(iii) *South Fork Nooksack River Watershed 1711000403*. Outlet(s) = South Fork Nooksack River (Lat 48.807821, Long -122.20252); upstream to endpoint(s) in: Bell Creek (48.69622, -121.87518); Cavanaugh Creek (48.644428, -122.110678); Deer Creek (48.603978, -122.092479); Hard Scrabble Falls Creek (48.759936, -122.22864); Howard Creek (48.612814, -121.966548); Hutchinson Creek (48.722661, -122.098154); Jones Creek (48.715065, -122.215748); Loomis Creek (48.665079, -121.815934); Mccarty Creek (48.727377, -122.219879); McGinnis Creek (48.61109, -121.958839); Plumbago Creek (48.607449, -122.097919); Skookum Creek (48.68695, -122.104163); Standard Creek (48.74615, -122.224446); Sygitowicz Creek (48.772017, -122.228041); Unnamed (48.599197, -122.073063); Unnamed (48.600525, -122.039331); Unnamed (48.600658, -122.022203); Unnamed (48.60222, -122.059486); Unnamed (48.602513, -122.016247); Unnamed (48.602549, -122.004019); Unnamed (48.604219, -121.992247); Unnamed (48.604523, -121.915611); Unnamed (48.60507, -122.068393); Unnamed (48.60642, -121.930219); Unnamed (48.607985, -121.918823); Unnamed (48.608266, -121.911587); Unnamed (48.609571, -121.982189); Unnamed (48.61019, -121.954851); Unnamed (48.622868, -122.117508); Unnamed (48.626209, -122.118838); Unnamed (48.630045, -

122.118545); Unnamed (48.642631, -122.122994); Unnamed (48.661705, -122.11915);
Unnamed (48.679949, -121.933538); Unnamed (48.681, -122.176044); Unnamed
(48.687907, -122.159547); Unnamed (48.69125, -121.932816); Unnamed (48.698785, -
121.912135); Unnamed (48.700841, -121.880954); Unnamed (48.70222, -122.109268);
Unnamed (48.725471, -122.168225); Unnamed (48.738227, -122.105899); Unnamed
(48.745076, -122.11099); Unnamed (48.776775, -122.221381); Unnamed (48.784569, -
122.220861); Unnamed (48.80173, -122.17607); Unnamed (48.819062, -122.229914);
Wanlick Creek (48.66309, -121.801322).

(iv) *Lower North Fork Nooksack River Watershed 1711000404*. Outlet(s) =
Anderson Creek (Lat 48.866658, Long -122.324286); Nooksack River (48.869803, -
122.319417); upstream to endpoint(s) in: Anderson Creek (48.789701, -122.330514);
Bell Creek (48.849394, -122.163142); Boulder Creek (48.936973, -122.02081); Canyon
Creek (48.90661, -121.989864); Coal Creek (48.890899, -122.15529); Kendall Creek
(48.926471, -122.148139); Kenney Creek (48.851169, -122.11389); Macaulay Creek
(48.834461, -122.236136); Maple Creek (48.926054, -122.07647); Mitchell Creek
(48.831119, -122.218653); North Fork Nooksack River (48.90561, -121.987814);
Racehorse Creek (48.879840, -122.126400); Smith Creek (48.843717, -122.255666);
South Fork Nooksack River (48.807821, -122.20252); Unnamed (48.803428, -
122.320427); Unnamed (48.809155, -122.328886); Unnamed (48.816885, -122.229843);
Unnamed (48.830856, -122.173308); Unnamed (48.834543, -122.153069); Unnamed
(48.843097, -122.158088); Unnamed (48.850754, -122.120796); Unnamed (48.90233, -
122.093446); Unnamed (48.904967, -122.085488); Unnamed (48.903288, -122.088323);
Unnamed (48.91174, -122.01464); Unnamed (48.916501, -122.063237); Unnamed

(48.918962, -122.015676); Unnamed (48.920779, -122.049370); Unnamed (48.916696, -122.103739); Wildcat Creek (48.903709, -122.000478).

(v) *Nooksack River Watershed 1711000405*. Outlet(s) = Nooksack River (Lat 48.773567, Long -122.599888); Silver Creek (48.821901, -122.53218); East Silver Creek (48.81687, -122.529067); upstream to endpoint(s) in: Anderson Creek (48.866658, -122.324286); Bertrand Creek (49.002306, -122.523098); West Bertrand Creek (48.993346, -122.537903); Fishtrap Creek (49.000000, -122.406584); Fourmile Creek (48.888842, -122.422525); Mormon Ditch (48.943782, -122.382402); Nooksack River (48.869803, -122.319417); Pepin Creek (49.000000, -122.473673); Stickney Slough (48.971492, -122.390969); Tenmile Creek (48.841838, -122.377054); Wiser Lake (48.899749, -122.511319); Unnamed (48.840108, -122.411055); Unnamed (48.849253, -122.431795); Unnamed (48.854029, -122.477112); Unnamed (48.854666, -122.439035); Unnamed (48.870978, -122.599973); Unnamed (48.896998, -122.339775); Unnamed (48.913285, -122.364233); Unnamed (48.926314, -122.591314); Unnamed (48.967318, -122.524502); Unnamed (49.00182, -122.50126); Unnamed (49.000000, -122.474268).

(3) Upper Skagit Subbasin 17110005—(i) *Skagit River/Gorge Lake Watershed 1711000504*. Outlet(s) = Goodell Creek (Lat 48.674399, Long -121.26504); Skagit River (48.672375, -121.262508); upstream to endpoint(s) in: Goodell Creek (48.729929, -121.314); Newhalem Creek (48.664832, -121.255072); Skagit River (48.676125, -121.241661).

(ii) *Skagit River/Diobsud Creek Watershed 1711000505*. Outlet(s) = Skagit River (48.522186, -121.431634); upstream to endpoint(s) in: Alma Creek (48.599105, -121.36141); Bacon Creek (48.675306, -121.453097); Copper Creek (48.588469, -

121.370907); Damnation Creek (48.627647, -121.339559); Diobsud Creek (48.583981, -121.441197); East Fork Bacon Creek (48.669034, -121.430334); Falls Creek (48.633251, -121.427043); Oakes Creek (48.619075, -121.412357); Skagit River (48.672375, -121.262508); Thorton Creek (48.649594, -121.307697); Unnamed (48.550953, -121.419261); Unnamed (48.627482, -121.324941); Unnamed (48.630803, -121.424055); Unnamed (48.652391, -121.297267); Unnamed (48.65642, -121.293119); Unnamed (48.657949, -121.279141); Unnamed (48.659526, -121.281845); Unnamed (48.659652, -121.284867).

(iii) *Cascade River Watershed 1711000506*. Outlet(s) = Cascade River (Lat 48.52147, Long -121.431469); upstream to endpoint(s) in: Boulder Creek (48.511828, -121.363515); Cascade River (48.422406, -121.124592); Clark Creek (48.519616, -121.404247); Found Creek (48.481464, -121.244895); Jordan Creek (48.479149, -121.396302); Kindy Creek (48.40346, -121.19997); North Fork Cascade River (48.46574, -121.165301); Sibley Creek (48.511764, -121.255306); Unnamed (48.516916, -121.369934); Unnamed (48.519853, -121.355352); Unnamed (48.522841, -121.416253); Unnamed (48.540716, -121.187277).

(iv) *Skagit River/illabot Creek Watershed 1711000507*. Outlet(s) = Skagit River (Lat 48.533888, Long -121.736697); upstream to endpoint(s) in: Aldon Creek (48.490787, -121.655981); Barr Creek (48.494766, -121.553562); Cascade River (48.52147, -121.431469); Corkindale Creek (48.523793, -121.481226); Illabot Creek (48.420072, -121.375128); Jackman Creek (48.52921, -121.696976); Mcleod Slough (48.478113, -121.628016); Miller Creek (48.483633, -121.657553); Olson Creek (48.554876, -121.448159); Rocky Creek (48.507094, -121.497771); Sauk River

(48.48173, -121.607129); Skagit River (48.522186, -121.431634); Sutter Creek (48.495127, -121.549745); Unnamed (48.471463, -121.542227); Unnamed (48.485698, -121.594461); Unnamed (48.487325, -121.545692); Unnamed (48.487425, -121.533453); Unnamed (48.501107, -121.661145).

(v) *Baker River Watershed 1711000508*. Outlet(s) = Baker River (Lat 48.533879, Long -121.736713); upstream to endpoint(s) in: Baker River (48.820068, -121.428469); Bald Eagle Creek (48.786682, -121.426929); Blum Creek (48.753095, -121.54535); Little Sandy Creek (48.704049, -121.698077); Morovitz Creek (48.745746, -121.677314); Park Creek (48.74079, -121.681977); Pass Creek (48.814934, -121.463275); Rocky Creek (48.645389, -121.707383); Skagit River (48.533888, -121.736697); Swift Creek (48.753261, -121.65719); Unnamed (48.734467, -121.636766).

(4) Sauk Subbasin 17110006—(i) *Upper Sauk River Watershed 1711000601*. Outlet(s) = Sauk River (Lat 48.173216, Long -121.472863); upstream to endpoint(s) in: Bedal Creek (48.079796, -121.392862); Black Oak Creek (48.178866, -121.45057); Camp Creek (48.150358, -121.280495); Chocwich Creek (48.072804, -121.399295); Crystal Creek (48.182984, -121.360841); Dead Duck Creek (48.179803, -121.373501); Elliott Creek (48.055379, -121.415773); Falls Creek (48.136819, -121.432256); Martin Creek (48.091595, -121.402576); North Fork Sauk River (48.096, -121.372171); Owl Creek (48.162177, -121.295991); Peek-A-Boo Creek (48.149748, -121.441535); South Fork Sauk River (47.986322, -121.393336); Stujack Creek (48.176825, -121.392682); Swift Creek (48.099536, -121.40116); Unnamed (48.117404, -121.416221); Unnamed

(48.164324, -121.447051); Unnamed (48.165143, -121.33003); Weden Creek (47.986316, -121.44378); White Chuck River (48.09948, -121.182565).

(ii) *Upper Suiattle River Watershed 1711000602*. Outlet(s) = Suiattle River (48.258351, -121.224572); upstream to endpoint(s) in: Downey Creek (48.28262, -121.209548); Suiattle River (48.210571, -121.088734); Sulphur Creek (48.256889, -121.174591).

(iii) *Lower Suiattle River Watershed 1711000603*. Outlet(s) = Suiattle River (Lat 48.335583, Long -121.547106); upstream to endpoint(s) in: All Creek (48.288401, -121.429156); Big Creek (48.343084, -121.441273); Black Creek (48.258382, -121.402801); Buck Creek (48.275388, -121.327822); Captain Creek (48.258384, -121.276479); Circle Creek (48.257783, -121.339964); Conrad Creek (48.276814, -121.414421); Harriet Creek (48.24803, -121.30351); Lime Creek (48.244288, -121.294507); Suiattle River (48.258351, -121.224572); Tenas Creek (48.336889, -121.431586); Unnamed (48.268285, -121.347595); Unnamed (48.2897, -121.432205); Unnamed (48.295835, -121.432122); Unnamed (48.303544, -121.423863).

(iv) *Lower Sauk River Watershed 1711000604*. Outlet(s) = Mcleod Slough (Lat 48.478113, Long -121.628016); Sauk River (48.48173, -121.607129); upstream to endpoint(s) in: Clear Creek (48.202408, -121.569295); Dan Creek (48.265631, -121.540646); Dutch Creek (48.179125, -121.486809); Everett Creek (48.283836, -121.526243); Goodman Creek (48.185225, -121.499311); Hilt Creek (48.440932, -121.573433); Murphy Creek (48.183863, -121.523654); Rinker Creek (48.395207, -121.583449); Sauk River (48.173216, -121.472863); Suiattle River (48.335583, -121.547106); Unnamed (48.235207, -121.590179); Unnamed (48.282638, -121.530751);

Unnamed (48.286653, -121.524888); Unnamed (48.305253, -121.545097); Unnamed (48.439232, -121.616077); White Creek (48.403202, -121.537828).

(5) Lower Skagit Subbasin 17110007—(i) *Middle Skagit River/Finney Creek Watershed 1711000701*. Outlet(s) = Skagit River (Lat 48.488951, Long -122.217614); upstream to endpoint(s) in: Alder Creek (48.552575, -121.932183); Boyd Creek (48.504855, -121.892273); Childs Creek (48.536412, -122.080267); Coal Creek (48.533942, -122.153196); Cumberland Creek (48.510468, -121.993332); Day Creek (48.406901, -121.97766); Finney Creek (48.465302, -121.687051); Gilligan Creek (48.48009, -122.130644); Grandy Creek (48.561171, -121.818094); Hansen Creek (48.559859, -122.208046); Jones Creek (48.558032, -122.046527); Loretta Creek (48.492814, -122.018527); Marietta Creek (48.511246, -121.930245); Mill Creek (48.500192, -121.873597); Muddy Creek (48.545767, -121.985109); O Toole Creek (48.508466, -121.919329); Pressentin Creek (48.509721, -121.846156); Quartz Creek (48.50301, -121.788233); Red Cabin Creek (48.552388, -122.016014); Skagit River (48.533385, -121.737928); Sorenson Creek (48.488763, -122.104541); Unnamed (48.480893, -122.141637); Unnamed (48.489945, -122.098925); Unnamed (48.495815, -121.753486); Unnamed (48.506371, -122.061784); Unnamed (48.509168, -122.104561); Unnamed (48.514861, -122.118166); Unnamed (48.528239, -122.166675); Unnamed (48.528601, -122.102507); Unnamed (48.535185, -122.087068); Unnamed (48.536394, -122.085423); Unnamed (48.537986, -122.186437); Unnamed (48.542105, -122.059915); Unnamed (48.547274, -122.185153); Unnamed (48.547956, -122.187094); Unnamed (48.548129, -121.954555); Unnamed (48.550762, -122.195456); Unnamed (48.552902, -121.959069); Unnamed (48.558115, -122.198368); Unnamed (48.558227, -121.99464);

Unnamed (48.561171, -121.818094); Unnamed (48.562984, -121.811731); Unnamed (48.55177, -122.204332); Wiseman Creek (48.532064, -122.135004).

(ii) *Lower Skagit River/Nookachamps Creek Watershed 1711000702*. Outlet(s) = Freshwater Slough (Lat 48.310713, Long -122.389592); North Fork Skagit River (48.362362, -122.470128); South Fork Skagit River (48.291833, -122.368233); upstream to endpoint(s) in: Britt Slough (48.393312, -122.358366); Carpenter Creek (48.394245, -122.277339); East Fork Nookachamps Creek (48.404247, -122.180275); Fisher Creek (48.30521, -122.296248); Lake Creek (48.324016, -122.224344); Skagit River (48.488951, -122.217614); Turner Creek (48.447398, -122.195845); Unnamed (48.358837, -122.422683); Unnamed (48.366754, -122.41293); Unnamed (48.43207, -122.314617); Unnamed (48.380192, -122.17967); Walker Creek (48.375354, -122.176074).

(6) Stillaguamish Subbasin 17110008—(i) *North Fork Stillaguamish River Watershed 1711000801*. Outlet(s) = North Fork Stillaguamish River (Lat 48.203615, Long -122.126717); upstream to endpoint(s) in: Boulder River (48.245122, -121.828242); Brooks Creek (48.289564, -121.906883); Deer Creek (48.364935, -121.794539); Deforest Creek (48.393279, -121.853014); Dicks Creek (48.300579, -121.836549); French Creek (48.239427, -121.774131); Fry Creek (48.256369, -121.897103); Furland Creek (48.25189, -121.699139); Grant Creek (48.295612, -122.031716); Hell Creek (48.252119, -121.964447); Higgins Creek (48.329407, -121.791932); Little Deer Creek (48.431748, -121.938181); Little French Creek (48.268189, -121.738851); Montague Creek (48.250887, -121.867164); Moose Creek (48.253373, -121.710713); North Fork Stillaguamish River (48.296662, -121.636091);

Rick Creek (48.349662, -121.899994); Rock Creek (48.272543, -122.084907); Rollins Creek (48.292951, -121.851904); Segelsen Creek (48.301774, -121.705063); Snow Gulch (48.241837, -121.688972); Squire Creek (48.201836, -121.630783); Unnamed (48.225817, -122.090659); Unnamed (48.23139, -122.079834); Unnamed (48.236267, -121.625132); Unnamed (48.236753, -122.051497); Unnamed (48.243945, -121.64302); Unnamed (48.24766, -122.036676); Unnamed (48.252573, -122.029955); Unnamed (48.255611, -121.714995); Unnamed (48.256057, -122.095346); Unnamed (48.256367, -121.939918); Unnamed (48.256695, -122.025848); Unnamed (48.257104, -121.90825); Unnamed (48.258393, -122.05691); Unnamed (48.258869, -121.764439); Unnamed (48.259213, -121.70866); Unnamed (48.263641, -121.763092); Unnamed (48.264861, -121.758039); Unnamed (48.265601, -122.004059); Unnamed (48.267786, -122.043722); Unnamed (48.268038, -121.715334); Unnamed (48.272044, -121.726641); Unnamed (48.27601, -121.935088); Unnamed (48.277489, -122.036087); Unnamed (48.27989, -121.990779); Unnamed (48.281081, -121.995266); Unnamed (48.281713, -121.649707); Unnamed (48.283383, -121.683334); Unnamed (48.28395, -121.646562); Unnamed (48.284296, -121.658284); Unnamed (48.28446, -121.920135); Unnamed (48.285216, -121.62783); Unnamed (48.2891, -121.769358); Unnamed (48.289217, -121.680426); Unnamed (48.289395, -121.755674); Unnamed (48.289507, -121.702145); Unnamed (48.290513, -121.743771); Unnamed (48.290671, -121.721475); Unnamed (48.290801, -121.746827); Unnamed (48.291004, -121.691566); Unnamed (48.291597, -121.693818); Unnamed (48.294273, -121.732756); Unnamed (48.294703, -121.826142); Unnamed (48.294855, -121.94067); Unnamed (48.295803, -121.789706); Unnamed (48.296128, -121.825352); Unnamed (48.297676, -121.802133); Unnamed (48.319239, -121.964661);

Unnamed (48.359397, -121.920923); Unnamed (48.361324, -121.93455); Unnamed (48.365655, -121.915496); Unnamed (48.366918, -121.941311); Unnamed (48.367183, -121.958052); Unnamed (48.367255, -121.956483); Unnamed (48.367469, -121.95337); Unnamed (48.370765, -121.89953); Unnamed (48.371334, -121.834956); Unnamed (48.372057, -121.893537); Unnamed (48.37667, -121.887195); Unnamed (48.384027, -121.879147); Unnamed (48.410307, -121.91761); Unnamed (48.297464, -121.81382); Unnamed (48.321184, -121.95493).

(ii) *South Fork Stillaguamish River Watershed 1711000802*. Outlet(s) = North Fork Stillaguamish River (Lat 48.203615, Long -122.126716); South Fork Stillaguamish River (48.203615, -122.126717); upstream to endpoint(s) in: Bear Creek (48.064612, -121.729061); Bear Creek (48.184588, -122.027434); Beaver Creek (48.088637, -121.513947); Bender Creek (48.066866, -121.589809); Benson Creek (48.10167, -121.738611); Blackjack Creek (48.051331, -121.624223); Boardman Creek (48.04009, -121.674988); Buck Creek (48.051042, -121.469806); Coal Creek (48.093827, -121.535554); Cranberry Creek (48.121886, -121.803277); Cub Creek (48.211009, -121.940174); Deer Creek (48.094863, -121.554797); Eldredge Creek (48.074512, -121.637347); Gordon Creek (48.086169, -121.660042); Hawthorn Creek (48.078912, -121.8082); Heather Creek (48.086826, -121.782066); Hempel Creek (48.075711, -121.743146); Jim Creek (48.209443, -121.929313); Mallardy Creek (48.067197, -121.657137); March Creek (48.196056, -122.15374); Marten Creek (48.079769, -121.613497); North Fork Canyon Creek (48.17598, -121.82868); Palmer Creek (48.0427, -121.474893); Perry Creek (48.077976, -121.482351); Porter Creek (48.197684, -122.008959); Rotary Creek (48.092322, -121.828833); Schweitzer Creek (48.06862, -

121.69012); Siberia Creek (48.166246, -122.022375); South Fork Canyon Creek (48.153787, -121.785021); South Fork Stillaguamish River (48.028261, -121.483458); Triple Creek (48.077106, -121.798123); Turlo Creek (48.108542, -121.764124); Twentytwo Creek (48.075825, -121.758819); Unnamed (48.047402, -121.505486); Unnamed (48.05552, -121.520966); Unnamed (48.075811, -121.563225); Unnamed (48.077807, -121.591337); Unnamed (48.080052, -121.580689); Unnamed (48.082802, -121.695828); Unnamed (48.084671, -121.683128); Unnamed (48.090013, -121.877766); Unnamed (48.091037, -121.815954); Unnamed (48.094741, -121.861679); Unnamed (48.100032, -121.796066); Unnamed (48.102487, -121.760967); Unnamed (48.10534, -122.027687); Unnamed (48.106381, -121.783693); Unnamed (48.107979, -121.790154); Unnamed (48.110592, -121.795323); Unnamed (48.11262, -121.80435); Unnamed (48.117007, -121.82596); Unnamed (48.118957, -121.83034); Unnamed (48.125862, -122.006135); Unnamed (48.131466, -121.905515); Unnamed (48.131881, -121.883717); Unnamed (48.134683, -121.938153); Unnamed (48.139202, -122.040321); Unnamed (48.140702, -121.932885); Unnamed (48.141896, -121.932379); Unnamed (48.143639, -121.932372); Unnamed (48.14431, -121.924623); Unnamed (48.14619, -122.017379); Unnamed (48.151471, -122.062372); Unnamed (48.166951, -122.097499); Unnamed (48.19464, -122.074897); Unnamed (48.199265, -122.091343); Unnamed (48.212118, -121.923782); Unnamed (48.21329, -122.028497); Unnamed (48.216753, -122.005396); Unnamed (48.219125, -121.989143); Unnamed (48.219724, -121.994297); Unnamed (48.224672, -121.975855); Unnamed (48.227563, -121.937492); Unnamed (48.233562, -121.953975); Wiley Creek (48.092015, -121.720605); Wisconsin Creek (48.068182, -121.719162).

(iii) *Lower Stillaguamish River Watershed 1711000803*. Outlet(s) = Hat Slough (Lat 48.198102, Long -122.359125); Stillaguamish River (48.238335, -122.376115); upstream to endpoint(s) in: Church Creek (48.26413, -122.283181); Freedom Creek (48.271454, -122.314228); Harvey Creek (48.233538, -122.128366); Jackson Gulch (48.210323, -122.241546); North Fork Stillaguamish River (48.203615, -122.126716); Pilchuck Creek (48.317396, -122.149205); Portage Creek (48.178785, -122.182919); Stillaguamish River (48.203562, -122.126899); Unnamed (48.171029, -122.260136); Unnamed (48.186672, -122.277088); Unnamed (48.195788, -122.283335); Unnamed (48.195835, -122.168612); Unnamed (48.196884, -122.166822); Unnamed (48.20183, -122.295689); Unnamed (48.203545, -122.315975); Unnamed (48.203747, -122.19962); Unnamed (48.214373, -122.151954); Unnamed (48.224202, -122.14526); Unnamed (48.227416, -122.199181); Unnamed (48.232175, -122.226793); Unnamed (48.23644, -122.226298); Unnamed (48.240242, -122.207791); Unnamed (48.241888, -122.201199); Unnamed (48.251066, -122.202687); Unnamed (48.256206, -122.197528); Unnamed (48.262756, -122.185006); Unnamed (48.271258, -122.316101); Unnamed (48.281636, -122.206013); Unnamed (48.300059, -122.213286); Unnamed (48.303378, -122.161323).

(7) Skykomish Subbasin 17110009—(i) *Tye And Beckler Rivers Watershed 1711000901*. Outlet(s) = Beckler River (Lat 47.715467, Long -121.341085); South Fork Skykomish River (47.71526, -121.339458); upstream to endpoint(s) in: Alpine Creek (47.70063, -121.253227); Beckler River (47.86115, -121.306314); East Fork Foss River (47.648892, -121.276727); Rapid River (47.819406, -121.237866); Tye River (47.717046, -121.226571); West Fork Foss River (47.627377, -121.310419).

(ii) *Skykomish River Forks Watershed 1711000902*. Outlet(s) = North Fork Skykomish River (Lat 47.813603, Long -121.577995); South Fork Skykomish River (47.812617, -121.577943); upstream to endpoint(s) in: Barclay Creek (47.791478, -121.48993); Bear Creek (47.889803, -121.382157); Beckler River (47.715467, -121.341085); Bitter Creek (47.841172, -121.50341); Bridal Veil Creek (47.798538, -121.56095); East Fork Miller River (47.648482, -121.373599); Excelsior Creek (47.869782, -121.486781); Goblin Creek (47.925037, -121.311518); Index Creek (47.759736, -121.496132); Kimball Creek (47.701302, -121.431138); Lewis Creek (47.81892, -121.505851); Maloney Creek (47.704343, -121.354423); Money Creek (47.707177, -121.442116); North Fork Skykomish River (47.920573, -121.303744); Salmon Creek (47.904002, -121.467022); Silver Creek (47.940366, -121.437503); Snowslide Gulch (47.857696, -121.508333); South Fork Skykomish River (47.71526, -121.339458); Troublesome Creek (47.899315, -121.400435); Trout Creek (47.832847, -121.433624); West Cady Creek (47.897548, -121.305775); West Fork Miller River (47.665692, -121.400066).

(iii) *Skykomish River/wallace River Watershed 1711000903*. Outlet(s) = McCoy Creek (Lat 47.847628, Long -121.824315); Skykomish River (47.860377, -121.819105); Unnamed (47.855571, -121.819268); upstream to endpoint(s) in: Anderson Creek (47.8044, -121.596583); Deer Creek (47.818891, -121.581685); Duffey Creek (47.833436, -121.689636); Hogarty Creek (47.842003, -121.612106); May Creek (47.856805, -121.632414); McCoy Creek (47.831308, -121.826994); North Fork Skykomish River (47.813603, -121.577995); North Fork Wallace River (47.879351, -121.659897); Olney Creek (47.879416, -121.717566); Proctor Creek (47.816171, -

121.652091); South Fork Skykomish River (47.812617, -121.577943); Unnamed (47.823821, -121.641583); Unnamed (47.854927, -121.788254); Unnamed (47.857101, -121.75812); Unnamed (47.858007, -121.797344); Unnamed (47.860413, -121.635072); Unnamed (47.84923, -121.784034); Unnamed (47.855893, -121.752873); Wagleys Creek (47.873165, -121.773098); Wallace River (47.877046, -121.645838).

(iv) *Sultan River Watershed 1711000904*. Outlet(s) = Sultan River (Lat 47.861005, Long -121.820933); upstream to endpoint(s) in: Sultan River (47.959618, -121.796288); Unnamed (47.887034, -121.829974).

(v) *Skykomish River/Woods Creek Watershed 1711000905*. Outlet(s) = Skykomish River (Lat 47.829872, Long -122.045091); upstream to endpoint(s) in: Barr Creek (Lat 47.829715, -121.905589); Carpenter Creek (48.015168, -121.930236); Elwell Creek (47.803646, -121.853672); Foye Creek (47.822602, -121.970674); High Rock Creek (47.837811, -121.959755); Mccoy Creek (47.847628, -121.824315); Richardson Creek (47.886315, -121.943935); Riley Slough (47.844202, -121.936904); Skykomish River (47.847403, -121.886481); Skykomish River (47.852292, -121.878907); Skykomish River (47.854738, -121.82681); Sorgenfrei Creek (47.961588, -121.934368); Sultan River (47.861005, -121.820933); Unnamed (47.818865, -122.005592); Unnamed (47.81969, -122.00526); Unnamed (47.829214, -121.844279); Unnamed (47.855571, -121.819268); Unnamed (47.88559, -121.921368); Unnamed (47.828244, -122.013516); Unnamed (47.834405, -122.016728); Unnamed (47.834695, -122.021191); Unnamed (47.836191, -121.980947); Unnamed (47.839322, -121.952037); Unnamed (47.839419, -121.843256); Unnamed (47.842963, -121.90049); Unnamed (47.844848, -121.889155); Unnamed (47.851422, -121.852499); Unnamed (47.853708, -121.907276); Unnamed

(47.853713, -121.91338); Unnamed (47.857546, -121.830245); West Fork Woods Creek (47.983648, -121.957293); Woods Creek (47.895095, -121.875437); Youngs Creek (47.807915, -121.83447).

(8) Snoqualmie Subbasin 17110010—(i) *Middle Fork Snoqualmie River*

Watershed 1711001003. Outlet(s) = Langlois Creek (Lat 47.635728, Long -121.90751); Snoqualmie River (47.640786, -121.927225); upstream to endpoint(s) in: Canyon Creek (47.568828, -121.981984); East Fork Griffin Creek (47.667678, -121.79524); Griffin Creek (47.679643, -121.802134); Lake Creek (47.506498, -121.871475); Langlois Creek (47.632423, -121.900585); Langlois Creek (47.63436, -121.910479); Patterson Creek (47.643294, -122.008601); Raging River (47.443286, -121.841753); Snoqualmie River (47.54132, -121.837391); Tokul Creek (47.556115, -121.829753); Unnamed (47.435758, -121.840802); Unnamed (47.469131, -121.887371); Unnamed (47.552211, -121.892074); Unnamed (47.55902, -121.959053); Unnamed (47.594862, -121.869153); Unnamed (47.602188, -121.86105); Unnamed (47.611929, -121.844129); Unnamed (47.617761, -121.987517); Unnamed (47.620823, -121.818809); Unnamed (47.67586, -121.821881); Unnamed (47.550625, -121.860269); Unnamed (47.573184, -121.882046); Unnamed (47.574562, -121.935597); Unnamed (47.574643, -121.923532); Unnamed (47.575296, -121.934856); Unnamed (47.575302, -121.928863); Unnamed (47.577661, -121.922239); Unnamed (47.580744, -121.89107); Unnamed (47.604032, -121.909863); Unnamed (47.60579, -121.908524); Unnamed (47.611586, -121.940718); Unnamed (47.61275, -121.923865); Unnamed (47.619886, -121.913184); Unnamed (47.624753, -121.913661).

(ii) *Lower Snoqualmie River Watershed 1711001004*. Outlet(s) = Snohomish River (47.832905, -122.05029); Unnamed (47.818865, -122.005592); upstream to endpoint(s) in: Adair Creek (47.713532, -122.00603); Cherry Creek (47.767647, -121.835764); Langlois Creek (47.635728, -121.90751); Margaret Creek (47.754562, -121.894491); North Fork Cherry Creek (47.747274, -121.922417); North Fork Creek (47.709704, -121.813858); Pearson Eddy Creek (47.7629, -121.993362); Peoples Creek (47.797003, -121.969785); Snoqualmie River (47.640786, -121.927225); South Fork Tolt River (47.692382, -121.690691); Stossel Creek (47.760057, -121.854479); Tolt River (47.639682, -121.925064); Tuck Creek (47.760138, -122.029513); Unnamed (47.66549, -121.969734); Unnamed (47.688103, -121.841747); Unnamed (47.697681, -121.877351); Unnamed (47.699359, -121.72867); Unnamed (47.711538, -121.835344); Unnamed (47.718309, -121.778212); Unnamed (47.719516, -121.683676); Unnamed (47.721128, -121.842676); Unnamed (47.721491, -121.711688); Unnamed (47.72187, -121.872933); Unnamed (47.639628, -121.916512); Unnamed (47.644835, -121.876373); Unnamed (47.652724, -121.927754); Unnamed (47.653832, -121.900784); Unnamed (47.663562, -121.912794); Unnamed (47.666377, -121.921884); Unnamed (47.66645, -121.968042); Unnamed (47.671854, -121.944823); Unnamed (47.6722, -121.934103); Unnamed (47.672893, -121.963119); Unnamed (47.673234, -121.906003); Unnamed (47.68202, -121.984816); Unnamed (47.683549, -121.985897); Unnamed (47.685397, -121.98674); Unnamed (47.688482, -121.942011); Unnamed (47.691215, -121.959693); Unnamed (47.691787, -121.975697); Unnamed (47.694662, -121.994754); Unnamed (47.701955, -121.998995); Unnamed (47.704253, -122.001792); Unnamed (47.709025, -122.004767); Unnamed (47.709854, -121.98468); Unnamed (47.716945, -122.001237);

Unnamed (47.721749, -121.989604); Unnamed (47.722623, -121.987303); Unnamed
 (47.723963, -121.996696); Unnamed (47.726844, -121.989954); Unnamed (47.733263, -
 122.010612); Unnamed (47.733962, -121.989698); Unnamed (47.734647, -122.013111);
 Unnamed (47.736303, -122.013677); Unnamed (47.736874, -121.98844); Unnamed
 (47.741838, -122.009593); Unnamed (47.744396, -121.949708); Unnamed (47.745593, -
 121.952919); Unnamed (47.745918, -121.954099); Unnamed (47.747444, -122.005028);
 Unnamed (47.747524, -121.957434); Unnamed (47.747678, -121.996583); Unnamed
 (47.74965, -121.977289); Unnamed (47.750208, -121.96435); Unnamed (47.750524, -
 121.965961); Unnamed (47.75188, -121.927084); Unnamed (47.752108, -121.969501);
 Unnamed (47.752268, -122.004156); Unnamed (47.75256, -121.964546); Unnamed
 (47.752757, -121.969499); Unnamed (47.752947, -121.957481); Unnamed (47.753339, -
 121.969357); Unnamed (47.754942, -121.97775); Unnamed (47.756436, -122.004367);
 Unnamed (47.758452, -122.002775); Unnamed (47.761886, -122.000354); Unnamed
 (47.762689, -121.991876); Unnamed (47.762853, -121.977877); Unnamed (47.767489, -
 122.000623); Unnamed (47.775507, -121.995614); Unnamed (47.775755, -121.99995);
 Unnamed (47.776255, -121.999798); Unnamed (47.779073, -121.991757); Unnamed
 (47.782249, -121.966177); Unnamed (47.788539, -122.000183); Unnamed (47.797789, -
 121.978354); Unnamed (47.801619, -121.981418); Unnamed (47.815259, -121.976869);
 Unnamed (47.815443, -121.99813); Unnamed (47.818865, -122.005592).

(9) Snohomish Subbasin 17110011—(i) *Pilchuck River Watershed 1711001101*.

Outlet(s) = French Creek (Lat 47.888547, Long -122.087439); Pilchuck River
 (47.900972, -122.092133); upstream to endpoint(s) in: Boulder Creek (48.024989, -
 121.811255); Catherine Creek (48.033209, -122.077074); Dubuque Creek (47.996688, -

122.010406); French Creek (47.898794, -122.057083); Kelly Creek (48.035392, -121.830635); Little Pilchuck Creek (48.112494, -122.060843); Miller Creek (47.996242, -121.781617); Pilchuck River (47.991273, -121.736285); Purdy Creek (48.008866, -121.892703); Worthy Creek (48.060661, -121.889486); Scott Creek (47.94956, -122.05759); Unnamed (47.946107, -122.078197); Unnamed (47.981529, -122.022251); Unnamed (48.014987, -122.065111); Unnamed (48.050521, -121.960436); Unnamed (48.052319, -121.873027); Unnamed (48.056823, -121.920701); Unnamed (47.893981, -122.064909); Unnamed (47.90029, -122.055264); Unnamed (47.900781, -122.071709); Unnamed (47.902216, -122.060278); Unnamed (47.909758, -122.055179); Unnamed (47.91308, -122.079588); Unnamed (47.91411, -122.073471); Unnamed (47.930159, -122.045611); Unnamed (47.970802, -122.07904); Wilson Creek (48.007178, -121.772124).

(ii) *Snohomish River Watershed 1711001102*. Outlet(s) = Quilceda Creek (48.045077, -122.207633); Snohomish River (48.020024, -122.199952); Steamboat Slough (48.035252, -122.187716); Union Slough (48.033026, -122.187941); Unnamed (48.042687, -122.203304); upstream to endpoint(s) in: Allen Creek (48.060189, -122.155845); Anderson Creek (47.823494, -122.063169); Batt Slough (47.893752, -122.101932); Burri Creek (47.996254, -122.12825); Ebey Slough (47.942077, -122.172019); Elliott Creek (47.832096, -122.058076); Evans Creek (47.837998, -122.084366); French Creek (47.905702, -122.006538); Lake Beecher (47.853003, -122.08659); Larimer Creek (47.889935, -122.141659); Quilceda Creek (48.126701, -122.136538); Snohomish River (47.845642, -122.066164); Swan Trail Slough (47.924299, -122.144247); Thomas Creek (47.885779, -122.133759); Unnamed

(47.89605, -122.024132); Unnamed (47.874632, -122.06789); Unnamed (47.878911, -122.062819); Unnamed (47.883214, -122.075259); Unnamed (47.883685, -122.064291); Unnamed (47.977505, -122.164439); Unnamed (47.989661, -122.153303); Unnamed (47.989986, -122.157628); Unnamed (47.992902, -122.153788); Unnamed (47.994226, -122.155257); Unnamed (47.999821, -122.157617); Unnamed (47.999833, -122.154307); Unnamed (48.000441, -122.160006); Unnamed (48.131795, -122.131717); Unnamed (47.826251, -122.063007); Unnamed (47.839617, -122.088583); Unnamed (47.842605, -122.060737); Unnamed (47.842773, -122.09302); Unnamed (47.845642, -122.066164); Unnamed (47.845758, -122.092344); Unnamed (47.846844, -122.064563); Unnamed (47.851113, -122.010167); Unnamed (47.852079, -122.018572); Unnamed (47.861172, -122.029372); Unnamed (47.864352, -122.091793); Unnamed (47.868184, -122.033887); Unnamed (47.868667, -122.071745); Unnamed (47.871627, -122.007148); Unnamed (47.872067, -122.012574); Unnamed (47.872807, -122.007458); Unnamed (47.872892, -122.020313); Unnamed (47.873683, -122.02625); Unnamed (47.873838, -122.023394); Unnamed (47.873972, -122.020824); Unnamed (47.873974, -122.018382); Unnamed (47.874621, -122.033932); Unnamed (47.87602, -122.018838); Unnamed (47.876587, -122.038858); Unnamed (47.877086, -122.10383); Unnamed (47.878155, -122.093306); Unnamed (47.878365, -122.047458); Unnamed (47.879616, -122.121293); Unnamed (47.880169, -122.120704); Unnamed (47.880744, -122.124328); Unnamed (47.880801, -122.115079); Unnamed (47.881683, -122.018106); Unnamed (47.882464, -122.049811); Unnamed (47.88295, -122.036805); Unnamed (47.883214, -122.128361); Unnamed (47.887449, -122.136266); Unnamed (47.887628, -122.115244); Unnamed (47.889292, -122.138508); Unnamed (47.889733, -122.139749); Unnamed (47.889949, -122.045002);

Unnamed (47.891627, -122.052284); Unnamed (47.893918, -122.1473); Unnamed
(47.893921, -122.15179); Unnamed (47.900751, -122.162699); Unnamed (47.901957, -
122.165281); Unnamed (47.903224, -122.152517); Unnamed (47.905749, -122.171392);
Unnamed (47.906952, -122.1713); Unnamed (47.909784, -122.174177); Unnamed
(47.917745, -122.179549); Unnamed (47.91785, -122.170724); Unnamed (47.917965, -
122.176424); Unnamed (47.918881, -122.166131); Unnamed (47.919953, -122.159256);
Unnamed (47.920163, -122.112239); Unnamed (47.922557, -122.152328); Unnamed
(47.926219, -122.164369); Unnamed (47.927044, -122.187844); Unnamed (47.927115, -
122.181581); Unnamed (47.928771, -122.182785); Unnamed (47.929155, -122.1575);
Unnamed (47.9292, -122.16225); Unnamed (47.931447, -122.155867); Unnamed
(47.935459, -122.190942); Unnamed (47.935975, -122.19135); Unnamed (47.936814, -
122.170221); Unnamed (47.939084, -122.174422); Unnamed (47.939185, -122.192305);
Unnamed (47.939694, -122.150153); Unnamed (47.940939, -122.155435); Unnamed
(47.940947, -122.157858); Unnamed (47.94244, -122.157373); Unnamed (47.942726, -
122.17536); Unnamed (47.945442, -122.192582); Unnamed (47.94649, -122.146106);
Unnamed (47.946592, -122.146917); Unnamed (47.947975, -122.179796); Unnamed
(47.949211, -122.139884); Unnamed (47.949321, -122.159191); Unnamed (47.949477, -
122.132724); Unnamed (47.949525, -122.141519); Unnamed (47.954551, -122.127872);
Unnamed (47.954673, -122.126737); Unnamed (47.954755, -122.131233); Unnamed
(47.955528, -122.131243); Unnamed (47.956927, -122.19563); Unnamed (47.959917, -
122.126245); Unnamed (47.960424, -122.126126); Unnamed (47.960595, -122.12673);
Unnamed (47.961773, -122.130148); Unnamed (47.99053, -122.133921); Unnamed
(48.001732, -122.129584); Unnamed (48.035728, -122.158051); Unnamed (48.038525, -

122.160828); Unnamed (48.039738, -122.153565); Unnamed (48.041372, -122.151583); Unnamed (48.042963, -122.150051); Unnamed (48.044102, -122.147735); Unnamed (48.047591, -122.150945); Unnamed (48.048094, -122.159389); Weiser Creek (48.004603, -122.127993); West Fork Quilceda Creek (48.114329, -122.192036); Wood Creek (47.925014, -122.184669); Wood Creek (47.946568, -122.177043).

(10) Lake Washington 17110012—(i) *Cedar River 1711001201*. Outlet(s) = Cedar River (Lat 47.500458, Long -122.215889); upstream to endpoint(s) in: Cedar River (47.419017, -121.781807); Hotel Creek (47.412859, -121.910189); Madsen Creek (47.454959, -122.139271); Molasses Creek (47.458236, -122.160236); North Rock Creek (47.398935, -121.906887); Peterson Creek (47.421385, -122.071428); Rock Creek (47.361425, -121.989528); Seventeen Creek (47.392916, -121.820937); Steele Creek (47.41485, -121.820204); Taylor Creek (47.371712, -121.827216); Webster Creek (47.415607, -121.919722); Williams Creek (47.406308, -121.859432); Unnamed (47.412034, -122.005441); Unnamed (47.397644, -122.015869); Walsh Lake Diversion Ditch (47.388412, -121.983268).

(ii) [Reserved]

(11) Duwamish Subbasin 17110013—(i) *Upper Green River Watershed 1711001301*. Outlet(s) = Green River (Lat 47.147332, Long -121.337530); Smay Creek (47.22558, -121.608029); upstream to endpoint(s) in: Friday Creek (47.220272, -121.457068); Green Canyon (47.224794, -121.573207); Intake Creek (47.205494, -121.400407); Lester Creek (47.201505, -121.478166); McCain Creek (47.209121, -121.530424); Sawmill Creek (47.169396, -121.450398); Smay Creek (47.262876, -121.571182); Snow Creek (47.267186, -121.414); Rock Creek (47.178042, -

121.519565); Twin Camp (47.172731, -121.380409); West Creek (47.261865, -121.413235); West Fork Smay Creek (47.274569, -121.606566); Wolf Creek (47.21422, -121.581762); Sunday Creek (47.258566, -121.367101); Tacoma Creek (47.187342, -121.364175).

(ii) *Middle Green River Watershed 1711001302*. Outlet(s) = Green River (Lat 47.288124, Long -121.97032); upstream to endpoint(s) in: Bear Creek (47.277192, -121.800206); Boundary Creek (47.274726, -121.71933); Charley Creek (47.245104, -121.789334); Cougar Creek (47.243692, -121.645414); Eagle Creek (47.304949, -121.723086); Gale Creek (47.263433, -121.700312); Green River (47.222773, -121.608297); North Fork Green River (47.284327, -121.665707); Piling Creek (47.281819, -121.756524); Smay Creek (47.22558, -121.608029); Sylvester Creek (47.245565, -121.654863).

(iii) *Lower Green River Watershed 1711001303*. Outlet(s) = Duwamish Waterway (Lat 47.583483, Long -122.359684); Unnamed (47.588989, -122.34426); upstream to endpoint(s) in: Big Soos Creek (47.372078, -122.144432); Black River (47.417508, -122.185115); Burns Creek (47.289464, -122.075333); Crisp Creek (47.294623, -122.055513); Cristy Creek (47.27092, -122.017489); Green River (47.288124, -121.97032); Jenkins Creek (47.37728, -122.080576); Little Soos Creek (47.378342, -122.106081); Mill Creek (47.303262, -122.272491); Newaukum Creek (47.225659, -121.906874); Ravensdale Creek (47.33485, -122.02312); Rock Creek (47.310539, -122.024859); Stonequarry Creek (47.244084, -121.932273); Unnamed (47.220884, -122.023242); Unnamed (47.220892, -122.016139); Unnamed (47.234075, -121.931801); Unnamed (47.325011, -122.200079); Unnamed (47.335135, -122.154992);

Unnamed (47.353478, -122.258274); Unnamed (47.360321, -122.225589); Unnamed (47.374183, -122.103011); Unnamed (47.389595, -122.225993).

(12) Puyallup Subbasin 17110014—(i) *Upper White River Watershed*

1711001401. Outlet(s) = Greenwater River (Lat 47.158517, Long -121.659041); White River (47.158251, -121.659559); upstream to endpoint(s) in: George Creek (47.099306, -121.472868); Greenwater River (47.091025, -121.456044); Huckleberry Creek (47.053496, -121.616046); Pyramid Creek (47.113047, -121.455762); Twentyeight Mile Creek (47.060856, -121.511537); Unnamed (47.051445, -121.71716); Unnamed (47.12065, -121.554216); Unnamed (47.134311, -121.583518); West Fork White River (47.047717, -121.692719); Whistle Creek (47.118448, -121.489277); White River (47.01416, -121.529457); Wrong Creek (47.043096, -121.699618).

(ii) *Lower White River Watershed 1711001402*. Outlet(s) = White River (Lat 47.200025, Long -122.255912); upstream to endpoint(s) in: Boise Creek (47.195608, -121.947967); Camp Creek (47.147051, -121.703951); Canyon Creek (47.13331, -121.862029); Clearwater River (47.084983, -121.783524); Greenwater River (47.158517, -121.659041); Scatter Creek (47.162429, -121.87438); Unnamed (47.222955, -122.097188); Unnamed (47.229087, -122.07162); Unnamed (47.233808, -122.109926); Unnamed (47.245631, -122.058795); Unnamed (47.247135, -122.22738); Unnamed (47.25371, -122.264826); Unnamed (47.261283, -122.13136); Unnamed (47.268104, -122.25123); Unnamed (47.238173, -122.223415); White River (47.158251, -121.659559).

(iii) *Carbon River Watershed 1711001403*. Outlet(s) = Carbon River (Lat 47.123651, Long -122.229222); upstream to endpoint(s) in: Carbon River (46.993075, -

121.926834); Coplar Creek (47.072996, -122.167682); Gale Creek (47.086262, -122.015047); Page Creek (47.12503, -122.009401); South Fork South Prairie Creek (47.099283, -121.954505); Unnamed (47.096464, -122.141219); Unnamed (47.097218, -122.145432); Unnamed (47.141246, -122.058699); Voight Creek (47.077134, -122.131266); Wilkeson Creek (47.089113, -122.011371).

(iv) *Upper Puyallup River Watershed 1711001404*. Outlet(s) = Carbon River (Lat 47.130578, Long -122.232672); Puyallup River (47.130572, -122.232719); upstream to endpoint(s) in: Carbon River (47.123651, -122.229222); Fox Creek (47.012694, -122.183844); Kellog Creek (46.913785, -122.083644); Le Dout Creek (46.935374, -122.054579); Niesson Creek (46.88451, -122.032222); Ohop Creek (46.941896, -122.222784); Puyallup River (46.904305, -122.03511); Unnamed (46.901022, -122.053271); Unnamed (46.915301, -122.08532); Unnamed (47.033738, -122.183585); Unnamed (47.072524, -122.217752); Unnamed (47.077709, -122.21324).

(v) *Lower Puyallup River Watershed 1711001405*. Outlet(s) = Hylebos Creek (Lat 47.260936, Long -122.360296); Puyallup River (47.262018, -122.419738); Wapato Creek (47.254142, -122.376043); upstream to endpoint(s) in: Canyonfalls Creek (47.141497, -122.220946); Carbon River (47.130578, -122.232672); Clarks Creek (47.175558, -122.318004); Clarks Creek (47.214046, -122.341441); Fennel Creek (47.149294, -122.186141); Hylebos Creek (47.268092, -122.304897); Puyallup River (47.130572, -122.232719); Simons Creek (47.223614, -122.306576); Swam Creek (47.198605, -122.392952); Unnamed (47.192643, -122.338319); Unnamed (47.212642, -122.362772); Unnamed (47.284933, -122.328406); West Hylebos Creek (47.28045, -122.319677); White River (47.200025, -122.255912).

(13) Nisqually Subbasin 17110015—(i) *Mashel/Ohop Watershed 1711001502*.

Outlet(s) = Lackamas Creek (Lat 46.8589, Long -122.488209); Nisqually River (46.864078, -122.478318); Tobolton Creek (46.863143, -122.480177); upstream to endpoint(s) in: Beaver Creek (46.858889, -122.187968); Busy Wild Creek (46.797885, -122.041534); Little Mashel River (46.850176, -122.27362); Lynch Creek (46.879792, -122.275113); Mashel River (46.84805, -122.104803); Nisqually River (46.823001, -122.30402); Ohop Valley Creek (46.924846, -122.260991); Powell Creek (46.84388, -122.436634); Tanwax Creek (46.941782, -122.280108); Tobolton Creek (46.823649, -122.48512); Twentyfive Mile Creek (46.924778, -122.259359); Unnamed (46.832309, -122.528978); Unnamed (46.907314, -122.261798).

(ii) *Lowland Watershed 1711001503*. Outlet(s) = Mcallister Creek (Lat 47.086256, Long -122.72842); Nisqually River (47.098476, -122.698813); Red Salmon Creek (47.096419, -122.687018); upstream to endpoint(s) in: Horn Creek (46.917907, -122.464722); Lacamas Creek (46.974424, -122.477971); Lacamas Creek (47.008577, -122.53729); Lackamas Creek (46.8589, -122.488209); Mcallister Creek (47.029715, -122.724885); Muck Creek (47.024063, -122.333195); Murray Creek (46.978923, -122.494325); Nisqually River (46.864078, -122.478318); Red Salmon Creek (47.083089, -122.678869); South Creek (46.985228, -122.287693); Thompson Creek (46.953803, -122.63521); Tobolton Creek (46.863143, -122.480177); Unnamed (46.88276, -122.481929); Unnamed (46.92337, -122.522371); Unnamed (46.999957, -122.652251); Unnamed (47.034211, -122.674166); Unnamed (47.03749, -122.735619); Unnamed (47.083824, -122.682663); Yelm Creek (46.947774, -122.606162).

(14) Deschutes 17110016—(i) *Deschutes River-Lake Lawrence 1711001601*.

Outlet(s) = Deschutes River (Lat 46.858414, -122.703615); upstream to endpoint(s) in: Deschutes River (46.803719, -122.41723); Fall Creek (46.801851, -122.508518); Hull Creek (46.815628, -122.551688); Johnson Creek (46.771083, -122.424056); Mitchell Creek (46.764822, -122.520257); Pipeline Creek (46.815019, -122.557139); Thurston Creek (46.787177, -122.426181); Unnamed (46.776798, -122.456757); Unnamed (46.821012, -122.552051); Unnamed (46.825293, -122.597406).

(ii) *Deschutes River-Capitol Lake 1711001602*. Outlet(s) = Deschutes River (Lat 47.043613, Long -122.909102); upstream to endpoint(s) in: Deschutes River (46.858414, -122.703615); Unnamed (46.883422, -122.791346); Unnamed (46.885585, -122.765692); Unnamed (46.900133, -122.761883); Unnamed (46.920776, -122.814054).

(15) Skokomish Subbasin 17110017—(i) *Skokomish River Watershed 1711001701*. Outlet(s) = Skokomish River (Lat 47.354102, Long -123.113454); Unnamed (47.346915, -123.1288); upstream to endpoint(s) in: Aristine Creek (47.339036, -123.330797); Brown Creek (47.426884, -123.273846); Cedar Creek (47.438747, -123.412558); Church Creek (47.460295, -123.455165); Fir Creek (47.336146, -123.302908); Frigid Creek (47.378231, -123.241695); Gibbons Creek (47.401886, -123.237898); Harp Creek (47.403646, -123.307961); Kirkland Creek (47.31996, -123.290062); Le Bar Creek (47.42431, -123.321985); McTaggart Creek (47.415308, -123.249773); Mussel Shell Creek (47.299392, -123.154163); North Fork Skokomish River (47.398124, -123.201673); Pine Creek (47.443201, -123.429394); Purdy Canyon (47.30192, -123.181551); Purdy Creek (47.304446, -123.188829); South Fork Skokomish River (47.490355, -123.460444); Unnamed (47.307518, -123.202431);

Unnamed (47.309215, -123.151179); Unnamed (47.312777, -123.250097); Unnamed (47.314724, -123.179082); Unnamed (47.315244, -123.177395); Unnamed (47.317283, -123.233949); Unnamed (47.318056, -123.168869); Unnamed (47.319036, -123.198978); Unnamed (47.320262, -123.233188); Unnamed (47.321111, -123.168254); Unnamed (47.32192, -123.307559); Unnamed (47.32264, -123.166947); Unnamed (47.324298, -123.166032); Unnamed (47.32618, -123.165265); Unnamed (47.327954, -123.1645); Unnamed (47.340589, -123.229732); Vance Creek (47.363339, -123.37747); Weaver Creek (47.309516, -123.23971).

(ii) [Reserved]

(16) Hood Canal Subbasin 17110018—(i) *Lower West Hood Canal Frontal Watershed 1711001802*. Outlet(s) = Eagle Creek (Lat 47.484737, Long -123.077896); Finch Creek (47.406474, -123.13894); Fulton Creek (47.618077, -122.974895); Jorsted Creek (47.526147, -123.050128); Lilliwaup Creek (47.468701, -123.114852); Unnamed (47.457462, -123.112951); Unnamed (47.570832, -123.01278); upstream to endpoint(s) in: Eagle Creek (47.499033, -123.100927); Finch Creek (47.406575, -123.145463); Fulton Creek (47.628033, -122.985435); Jorsted Creek (47.52439, -123.066123); Lilliwaup Creek (47.470625, -123.116282); Unnamed (47.459167, -123.133047); Unnamed (47.57275, -123.020786).

(ii) *Hamma Hamma River Watershed 1711001803*. Outlet(s) = Hamma Hamma River (Lat 47.546939, Long -123.045218); upstream to endpoint(s) in: Hamma Hamma River (47.560258, -123.066043); North Fork John Creek (47.545766, -123.072377); South Fork John Creek (47.541154, -123.07576).

(iii) *Duckabush River Watershed 1711001804*. Outlet(s) = Duckabush River (Lat 47.650063, Long -122.936017); Unnamed (47.651985, -122.935914); upstream to endpoint(s) in: Duckabush River (47.683876, -123.069991); Unnamed (47.656559, -122.939617); Unnamed (47.658797, -122.946881); Unnamed (47.664171, -122.958939); Unnamed (47.665164, -122.971688).

(iv) *Dosewallips River Watershed 1711001805*. Outlet(s) = Dosewallips River (Lat 47.687868, Long -122.895799); upstream to endpoint(s) in: Dosewallips River (47.728734, -123.112328); Gamm Creek (47.740548, -123.064117); Rocky Brook (47.720965, -122.941729); Unnamed (47.703663, -122.942585); Unnamed (47.718461, -123.001437).

(v) *Big Quilcene River Watershed 1711001806*. Outlet(s) = Big Quilcene River (Lat 47.818629, Long -122.861797); upstream to endpoint(s) in: Big Quilcene River (47.81031, -122.91278); Unnamed (47.844904, -122.934513).

(vi) *Upper West Hood Canal Frontal Watershed 1711001807*. Outlet(s) = Donovan Creek (Lat 47.827622, Long -122.858429); Indian George Creek (47.807881, -122.869227); Little Quilcene River (47.826459, -122.862109); Spencer Creek (47.745578, -122.875483); Tarboo Creek (47.860282, -122.813536); Thorndyke Creek (47.816713, -122.739675); Unnamed (47.69516, -122.807343); Unnamed (47.742597, -122.767326); Unnamed (47.780439, -122.865654); Unnamed (47.803054, -122.748043); Unnamed (47.809788, -122.791892); Unnamed (47.827807, -122.696476); Unnamed (47.870429, -122.693831); upstream to endpoint(s) in: Donovan Creek (47.852344, -122.859015); Indian George Creek (47.806041, -122.872191); Leland Creek (47.87993, -122.878552); Little Quilcene River (47.87162, -122.920887); Spencer Creek (47.757649,

-122.895277); Tarboo Creek (47.917525, -122.825126); Unnamed (47.700468, -122.804836); Unnamed (47.745248, -122.772127); Unnamed (47.780486, -122.870015); Unnamed (47.817369, -122.763825); Unnamed (47.826301, -122.786512); Unnamed (47.845809, -122.709645); Unnamed (47.847797, -122.878694); Unnamed (47.857542, -122.837721); Unnamed (47.86785, -122.773687); Unnamed (47.871141, -122.795142); Unnamed (47.886493, -122.830585); Unnamed (47.888336, -122.801101); Unnamed (47.889882, -122.698239).

(vii) *West Kitsap Watershed 1711001808*. Outlet(s) = Anderson Creek (Lat 47.566784, Long -122.967625); Anderson Creek (47.665387, -122.757767); Big Beef Creek (47.651916, -122.783607); Boyce Creek (47.609223, -122.915305); Dewatto River (47.45363, -123.048642); Mission Creek (47.430736, -122.872828); Seabeck Creek (47.63558, -122.834296); Stavis Creek (47.625046, -122.872893); Tahuya River (47.376565, -123.038419); Union River (47.44818, -122.838076); Unnamed (47.453546, -123.048616); Unnamed (47.585137, -122.945064); Unnamed (47.826269, -122.56367); upstream to endpoint(s) in: Anderson Creek (47.660179, -122.756351); Bear Creek (47.498732, -122.811755); Big Beef Creek (47.589887, -122.846319); Boyce Creek (47.609187, -122.914277); Mission Creek (47.499061, -122.850487); Seabeck Creek (47.623835, -122.838375); Stavis Creek (47.605496, -122.872936); Tin Mine Creek (47.577069, -122.829158); Union River (47.527109, -122.785967); Unnamed (47.416887, -122.999502); Unnamed (47.43499, -123.053793); Unnamed (47.438227, -123.043285); Unnamed (47.451055, -123.016346); Unnamed (47.451077, -122.914789); Unnamed (47.454548, -122.986648); Unnamed (47.457926, -122.82675); Unnamed (47.459434, -122.841199); Unnamed (47.461807, -122.986012); Unnamed (47.464136, -

122.996728); Unnamed (47.471436, -123.026462); Unnamed (47.472953, -122.853144); Unnamed (47.473856, -122.98827); Unnamed (47.496903, -122.832756); Unnamed (47.499811, -122.959843); Unnamed (47.513538, -122.976821); Unnamed (47.518086, -122.944624); Unnamed (47.533867, -122.966128); Unnamed (47.556351, -122.93869); Unnamed (47.578134, -122.831814); Unnamed (47.578146, -122.944137); Unnamed (47.617962, -122.881294); Unnamed (47.823731, -122.557569).

(17) Kitsap Subbasin 17110019—(i) *Kennedy/Goldsborough Watershed*

1711001900. Outlet(s) = Campbell Creek (Lat 47.222039, Long -123.025109); Cranberry Creek (47.262433, -123.015892); Deer Creek (47.259411, -123.009378); Goldsborough Creek (47.209541, -123.09519); Kennedy Creek (47.096767, -123.085708); Johns Creek (47.246105, -123.042959); Lynch Creek (47.152742, -123.052635); Malaney Creek (47.25142, -123.0197); Mill Creek (47.195478, -122.996269); Perry Creek (47.04923, -123.005168); Schneider Creek (47.091599, -123.075637); Shelton Creek (47.213868, -123.095177); Sherwood Creek (47.375171, -122.835464); Skookum Creek (47.127879, -123.088396); Uncle John Creek (47.223441, -123.028998); Unnamed (47.138813, -123.076426); Unnamed (47.348035, -123.073581); Unnamed (47.406636, -122.887438); Unnamed (47.43145, -122.848454); Unnamed (47.378832, -122.974308); Unnamed (47.382516, -122.948722); upstream to endpoint(s) in: Campbell Creek (47.226397, -122.997893); Cranberry Creek (47.283615, -123.111755); Deer Creek (47.327279, -122.911546); Gosnell Creek (47.132634, -123.208108); Johns Creek (47.252177, -123.129051); Kamilche Creek (47.109481, -123.120016); Kennedy Creek (47.079184, -123.126612); Lynch Creek (47.16124, -123.063246); Malaney Creek (47.248952, -123.011342); North Fork Goldsborough Creek (47.226417, -123.221454); Perry Creek

(47.053893, -123.021482); Rock Creek (47.173241, -123.200765); Schneider Creek (47.071686, -123.056453); Shelton Creek (47.22776, -123.11259); Shumocher Creek (47.31782, -122.992107); South Fork Goldsborough Creek (47.186447, -123.252006); Uncle John Creek (47.230245, -123.028211); Unnamed (47.081522, -123.102753); Unnamed (47.097705, -123.216015); Unnamed (47.100105, -123.216045); Unnamed (47.1455, -123.081178); Unnamed (47.149979, -123.116498); Unnamed (47.154715, -123.122654); Unnamed (47.182813, -123.154821); Unnamed (47.183317, -122.993257); Unnamed (47.187858, -123.166457); Unnamed (47.209485, -123.249564); Unnamed (47.223587, -122.981336); Unnamed (47.225845, -123.243846); Unnamed (47.226397, -122.997893); Unnamed (47.25604, -123.060758); Unnamed (47.293868, -123.03765); Unnamed (47.322265, -122.993083); Unnamed (47.345989, -123.087997); Unnamed (47.361619, -122.901294); Unnamed (47.36676, -122.866433); Unnamed (47.37043, -122.975612); Unnamed (47.378331, -122.84611); Unnamed (47.37179, -122.957923); Unnamed (47.385117, -122.898154); Unnamed (47.41665, -122.847985).

(ii) *Puget Sound 1711001901*. Outlet(s) = Anderson Creek (Lat 47.527851, Long -122.683072); Barker Creek (47.637847, -122.670114); Blackjack Creek (47.542244, -122.627229); Burley Creek (47.412304, -122.631424); Chico Creek (47.602679, -122.705419); Clear Creek (47.652349, -122.68632); Coulter Creek (47.406361, -122.819291); Crescent Valley (47.345209, -122.583101); Crouch Creek (47.652147, -122.62956); Curley Creek (47.523499, -122.546087); Gorst Creek (47.527855, -122.697881); Illahe Creek (-122.595950, 47.610235); McCormick Creek (47.371692, -122.624236); Minter Creek (47.371035, -122.702469); North Creek (47.337484, -122.592533); Olalla Creek (47.425398, -122.551857); Purdy Creek (47.387232, -

122.626582); Rocky Creek (47.371062, -122.78137); Unnamed (47.538696, -
 122.65636); Unnamed (47.645936, -122.69393); Unnamed (47.712429, -122.613727);
 Unnamed (47.717886, -122.656445); Unnamed (47.750936, -122.649151); Unnamed
 (47.770208, -122.559178); Unnamed (47.794724, -122.512034); upstream to endpoint(s)
 in: Anderson Creek (47.505029, -122.69725); Barker Creek (47.647598, -122.658222);
 Blackjack Creek (47.477097, -122.648962); Burley Creek (47.477671, -122.616862);
 Clear Creek (47.685465, -122.684758); Coulter Creek (47.44497, -122.768147); Crescent
 Valley (47.387661, -122.573475); Crouch Creek (47.652949, -122.636766); Curley
 Creek (47.470853, -122.591807); Dickerson Creek (47.574216, -122.730548); Gorst
 Creek (47.517739, -122.743902); Heins Creek (47.532474, -122.719281); Huge Creek
 (47.416967, -122.697785); Illahe Creek (-122.610219, 47.608727); Kitsap Creek
 (47.565562, -122.705833); Lost Creek (47.580058, -122.772143); McCormick Creek
 (47.360692, -122.616179); Minter Creek (47.417427, -122.68133); North Creek
 (47.345176, -122.602062); Olalla Creek (47.458804, -122.575015); Parish Creek
 (47.525007, -122.715043); Purdy Creek (47.424097, -122.601949); Rocky Creek
 (47.406815, -122.784426); Salmonberry Creek (47.521201, -122.583691); Unnamed
 (47.375417, -122.764465); Unnamed (47.407431, -122.816273); Unnamed (47.458461, -
 122.654176); Unnamed (47.461146, -122.658942); Unnamed (47.508334, -122.678469);
 Unnamed (47.647488, -122.631401); Unnamed (47.652615, -122.705727); Unnamed
 (47.655222, -122.70488); Unnamed (47.656966, -122.63518); Unnamed (47.669431, -
 122.688117); Unnamed (47.717933, -122.672648); Unnamed (47.718897, -122.613062);
 Unnamed (47.760942, -122.618495); Unnamed (47.763767, -122.637787); Unnamed
 (47.809222, -122.537334); Unnamed (47.80967, -122.532478); Unnamed (47.583852, -

122.799196); Unnamed (47.386707, -122.68788); Unnamed (47.772157, -122.560033); Unnamed (47.772641, -122.555341); Unnamed (47.796516, -122.513062); Unnamed (47.689613, -122.537011); Wildcat Creek (47.601646, -122.774958).

(iii) *Woodland Creek-McLane Creek Frontal 1711001902*. Outlet(s) = McLane Creek (Lat 47.03475, Long -122.990395); Unnamed (47.095699, -122.94549); Woodard Creek (47.120914, -122.861775); Woodland Creek (47.092725, -122.823614); upstream to endpoint(s) in: McLane Creek (47.001481, -123.009329); Swift Creek (47.031622, -123.008267); Unnamed (47.028842, -122.985445); Unnamed (47.060468, -122.964496); Unnamed (47.071776, -122.827649); Woodard Creek (47.040784, -122.853709); Woodland Creek (47.034018, -122.781534);

(iv) *Puget Sound-East Passage 1711001904*. Outlet(s) = Christensen Creek (Lat 47.403038, Long -122.51902); Judd Creek (47.402315, -122.467989); Lunds Gulch (47.859951, -122.334873); Shingle Mill Creek (47.480286, -122.482557); Unnamed (47.646085, -122.567546); Unnamed (47.694552, -122.536480); upstream to endpoint(s) in: Judd Creek (47.416852, -122.47661); Lunds Gulch (47.859132, -122.327183); Shingle Mill Creek (47.467927, -122.474433); Unnamed (47.40206, -122.512865); Unnamed (47.641478, -122.566998); Unnamed (47.689613, -122.537011).

(v) *Chambers Creek 1711001906*. Outlet(s) = Chambers Creek (Lat 47.186966, Long -122.583739); upstream to endpoint(s) in: Chambers Creek (47.155756, -122.527739); Clover Creek (47.136455, -122.433679); Clover Creek (47.155756, -122.527739); Flett Creek (47.179364, -122.497762); Leach Creek (47.209364, -122.512372); Ponce De Leon Creek (47.162148, -122.52888).

(vi) *Port Ludlow Creek-Chimacum Creek 1711001908*. Outlet(s) = Chimacum Creek (Lat 48.050532, Long -122.784429); Unnamed (47.917613, -122.703872); upstream to endpoint(s) in: Unnamed (47.918337, -122.709325); Unnamed (47.927687, -122.805588); Unnamed (47.947673, -122.850871); Unnamed (47.954906, -122.7614); Unnamed (47.986329, -122.80519).

(18) Dungeness-Elwha Subbasin 17110020—(i) *Discovery Bay Watershed 1711002001*. Outlet(s) = Contractors Creek (Lat 48.04559, Long -122.874989); Salmon Creek (47.989306, -122.889155); Snow Creek (47.989848, -122.88472); upstream to endpoint(s) in: Andrews Creek (47.916408, -122.900812); Contractors Creek (48.041198, -122.879974); Salmon Creek (47.968169, -122.963869); Snow Creek (47.935356, -122.943211).

(ii) *Sequim Bay Watershed 1711002002*. Outlet(s) = Bell Creek (Lat 48.083191, Long -123.052803); Jimmycomelately Creek (48.023348, -123.005179); Johnson Creek (48.062731, -123.040899); Unnamed (48.028495, -122.996498); upstream to endpoint(s) in: Bell Creek (48.062921, -123.103118); Jimmycomelately Creek (47.991106, -123.012853); Johnson Creek (48.054282, -123.060541); Unnamed (47.98473, -123.004078); Unnamed (48.028602, -122.994476); Unnamed (48.077698, -123.085489).

(iii) *Dungeness River Watershed 1711002003*. Outlet(s) = Cassalery Creek (Lat 48.134645, Long -123.096671); Dungeness River (48.150413, -123.132404); Gierin Creek (48.115086, -123.060063); Unnamed (48.137866, -123.101098); Unnamed (48.153473, -123.12799); upstream to endpoint(s) in: Bear Creek (48.05479, -123.159906); Canyon Creek (48.022505, -123.141514); Cassalery Creek (48.105307, -123.121002); Dungeness River (47.938446, -123.089756); Gierin Creek (48.091597, -

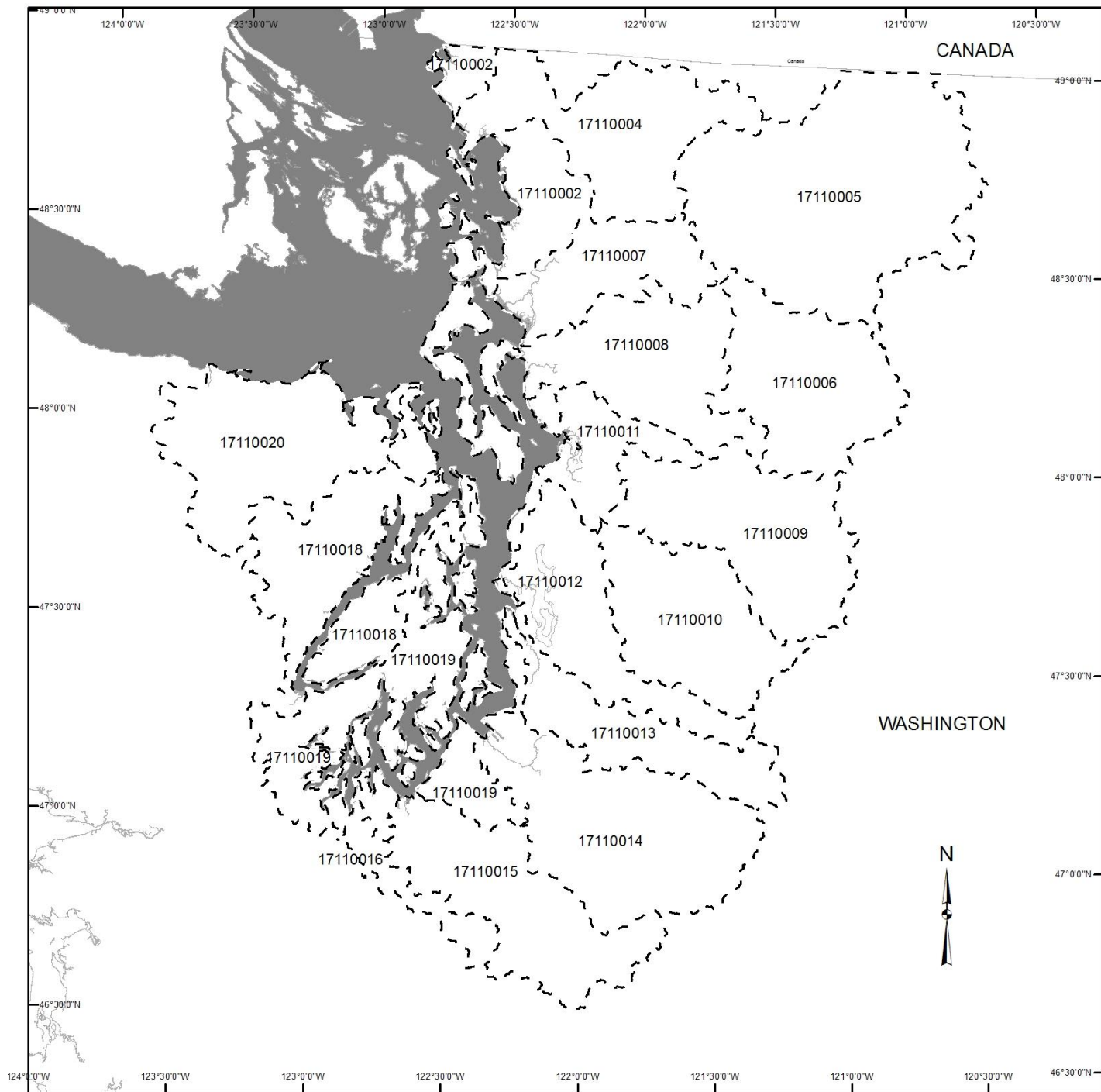
123.095521); Gold Creek (47.941297, -123.086086); Gray Wolf River (47.916035, -123.242895); Matriotti Creek (48.068168, -123.193047); Unnamed (48.065991, -123.17376); Unnamed (48.06625, -123.169857); Unnamed (48.068168, -123.193047); Unnamed (48.068308, -123.193024); Unnamed (48.090644, -123.191398); Unnamed (48.106277, -123.076132); Unnamed (48.107219, -123.187879); Unnamed (48.112875, -123.160292); Unnamed (48.116253, -123.157937); Unnamed (48.116481, -123.141572); Unnamed (48.118304, -123.078321); Unnamed (48.124002, -123.143503); Unnamed (48.127704, -123.111613); Unnamed (48.12912, -123.148566); Unnamed (48.130335, -123.127456).

(iv) *Port Angeles Harbor Watershed 1711002004*. Outlet(s) = Bagley Creek (Lat 48.114035, Long -123.340599); Dry Creek (48.134316, -123.520821); Ennis Creek (48.117472, -123.405373); Lees Creek (48.114686, -123.388339); McDonald Creek (48.125382, -123.220649); Morse Creek (48.117713, -123.351674); Siebert Creek (48.120481, -123.289579); Tumwater Creek (48.124386, -123.445396); Valley Creek (48.122912, -123.437893); upstream to endpoint(s) in: Bagley Creek (48.057013, -123.319844); Dry Creek (48.123255, -123.520058); East Fork Lees Creek (48.075209, -123.37549); East Fork Siebert Creek (48.02011, -123.287767); Ennis Creek (48.052991, -123.411534); Lees Creek (48.078066, -123.394993); McDonald Creek (48.017887, -123.232576); Morse Creek (48.061048, -123.349345); Pederson Creek (48.026991, -123.253803); Tumwater Creek (48.092665, -123.4702); Unnamed (48.0143, -123.260326); Unnamed (48.030295, -123.301668); Valley Creek (48.106808, -123.451781); West Fork Siebert Creek (48.000634, -123.304205).

(v) *Elwha River Watershed 1711002007*. Outlet(s) = Elwha River (Lat 48.146456, Long -123.568438); upstream to endpoint(s) in: Elwha River (47.742466, -123.54088); Unnamed (48.13353, -123.557816); Unnamed (48.143336, -123.555008); Indian Creek (48.07806, -123.725186); Little River (48.05994, -123.520805).

(19) Maps of proposed critical habitat for the Puget Sound steelhead DPS follow:



Map of the Puget Sound Steelhead DPS

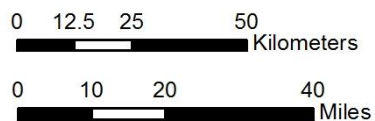


Area of Detail



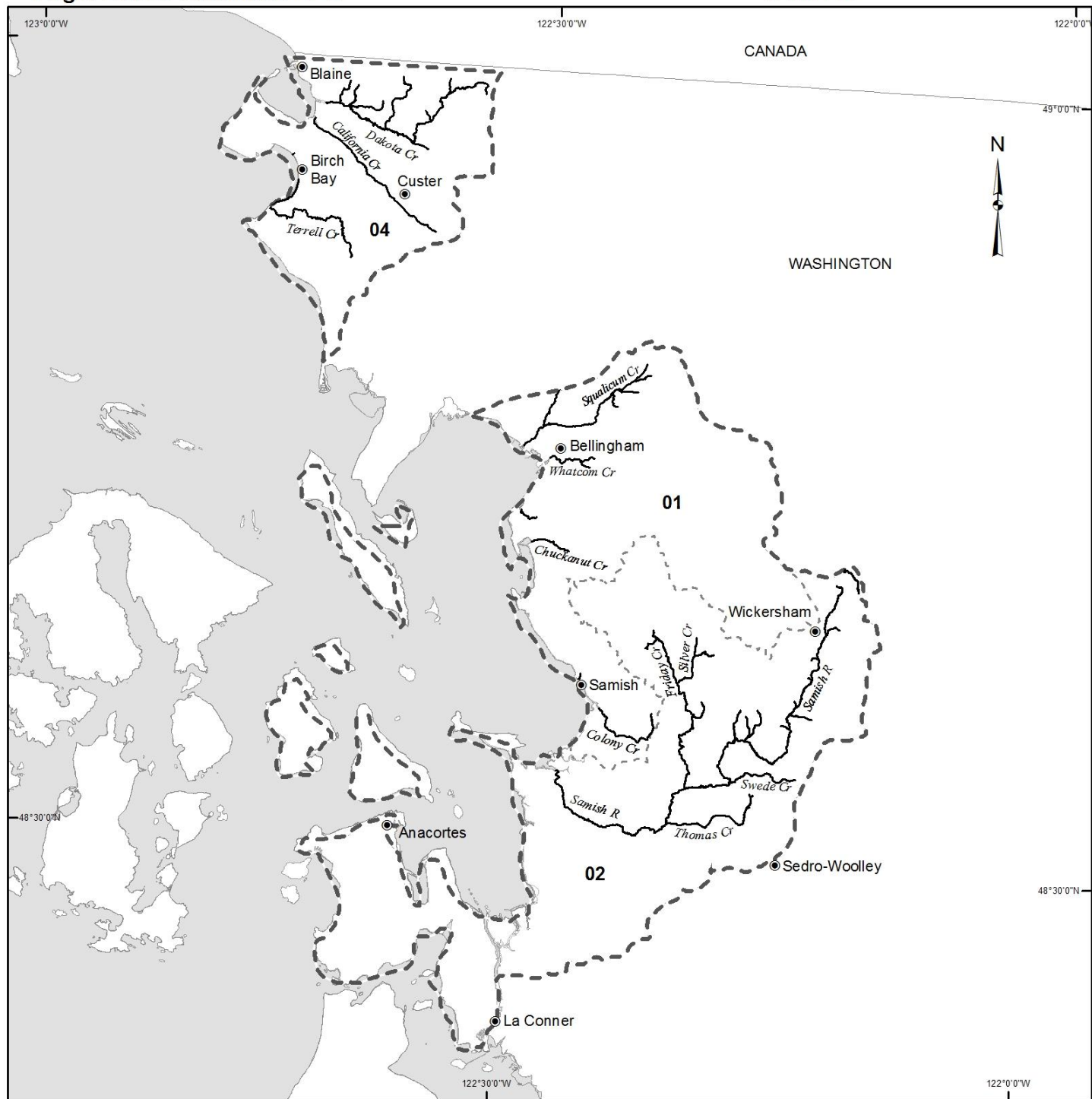
Legend

-  State Boundaries
-  Subbasin Boundaries



Final Critical Habitat for the Puget Sound Steelhead DPS

Strait Of Georgia Subbasin
17110002



● Cities

□ State Boundaries

~ Critical Habitat

□ Watershed Boundary

□ Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110002, watershed = 1711000201)

0 3.75 7.5 15
Kilometers

0 3 6 12
Miles

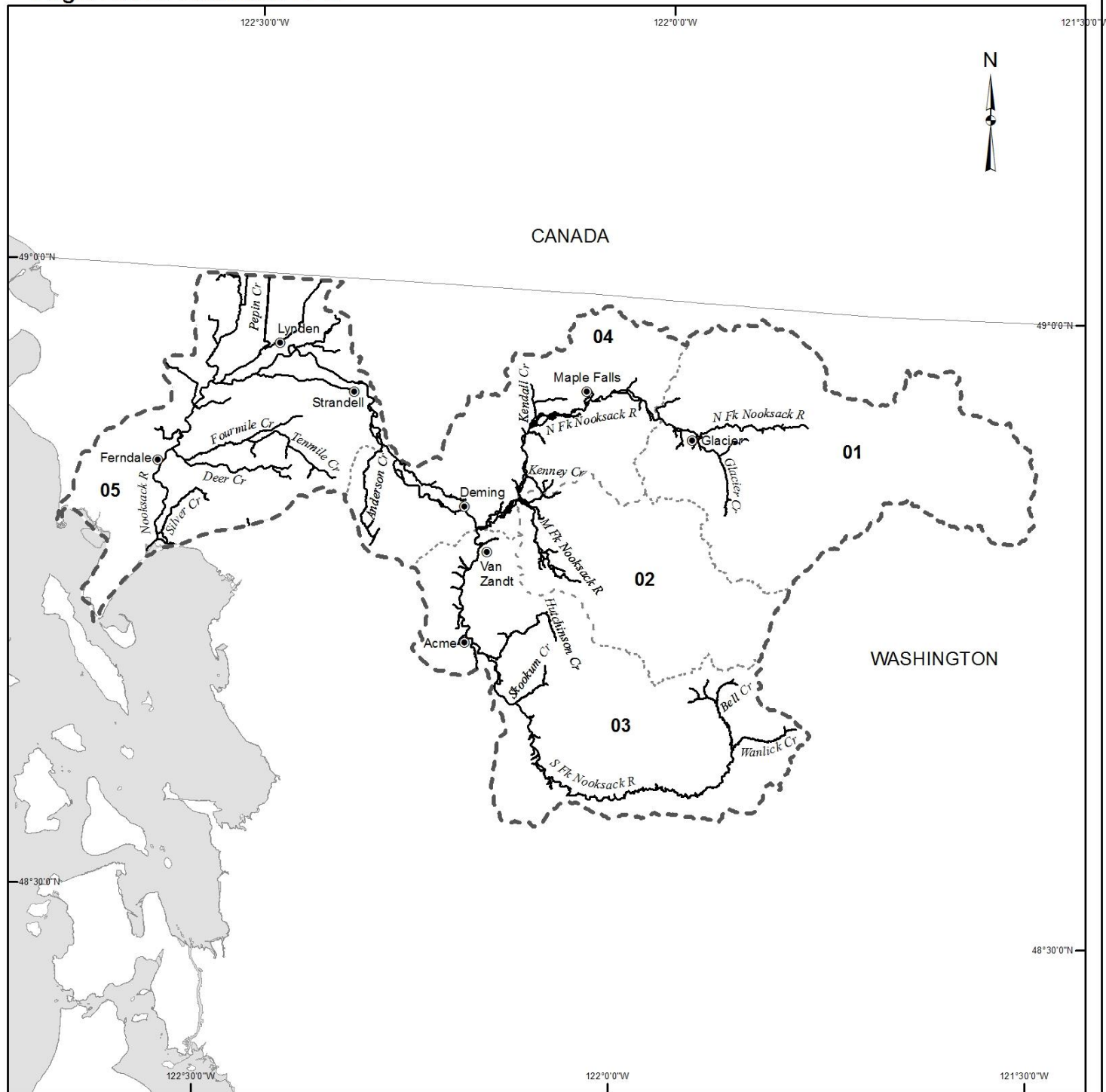
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Nooksack Subbasin
17110004



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110004, watershed = 1711000401)



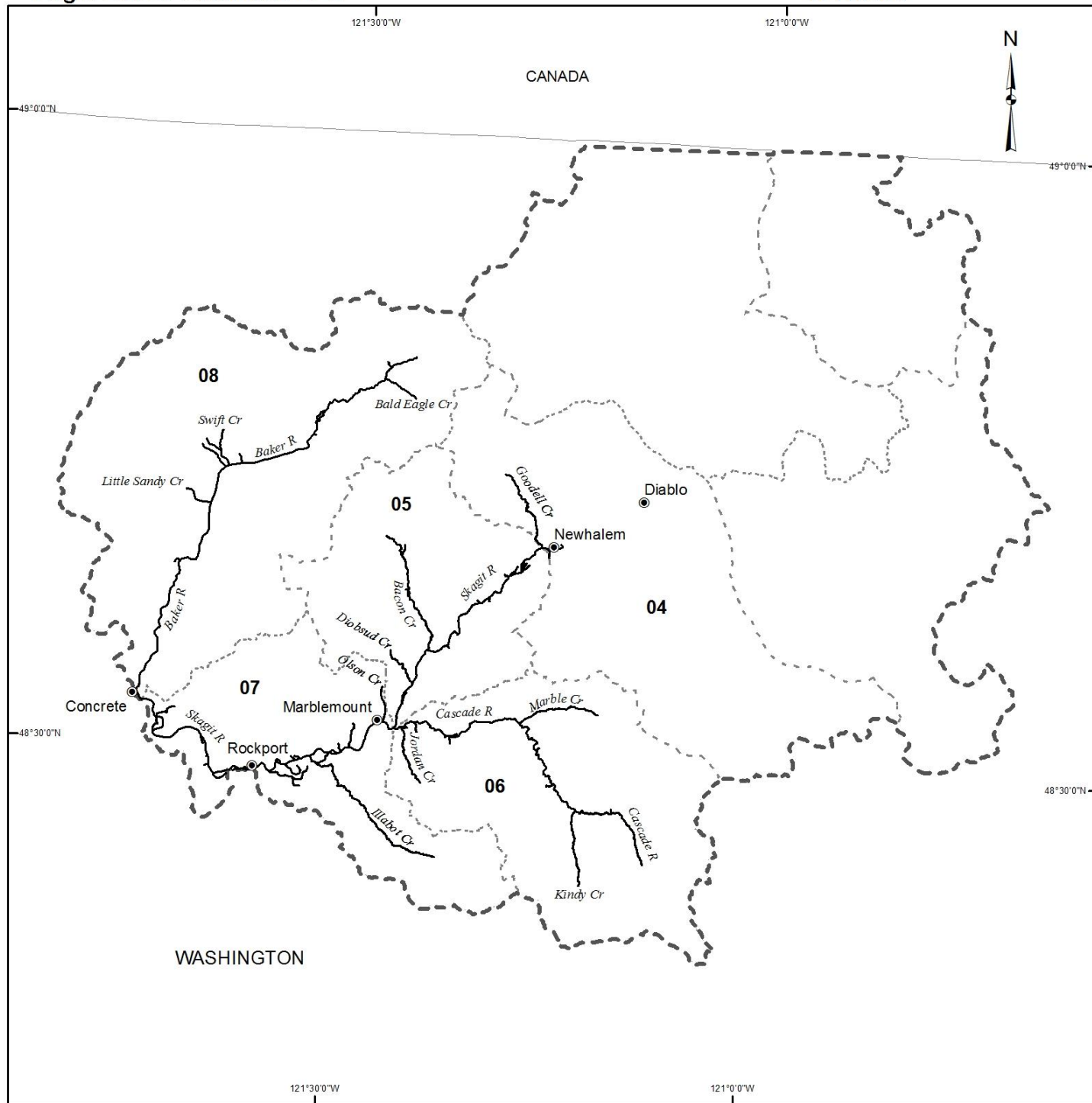
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Upper Skagit Subbasin
17110005



● Cities

□ State Boundaries

~ Critical Habitat

--- Watershed Boundary

- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110005, watershed = 1711000501)

0 3.75 7.5 15
Kilometers

0 3.75 7.5 15
Miles

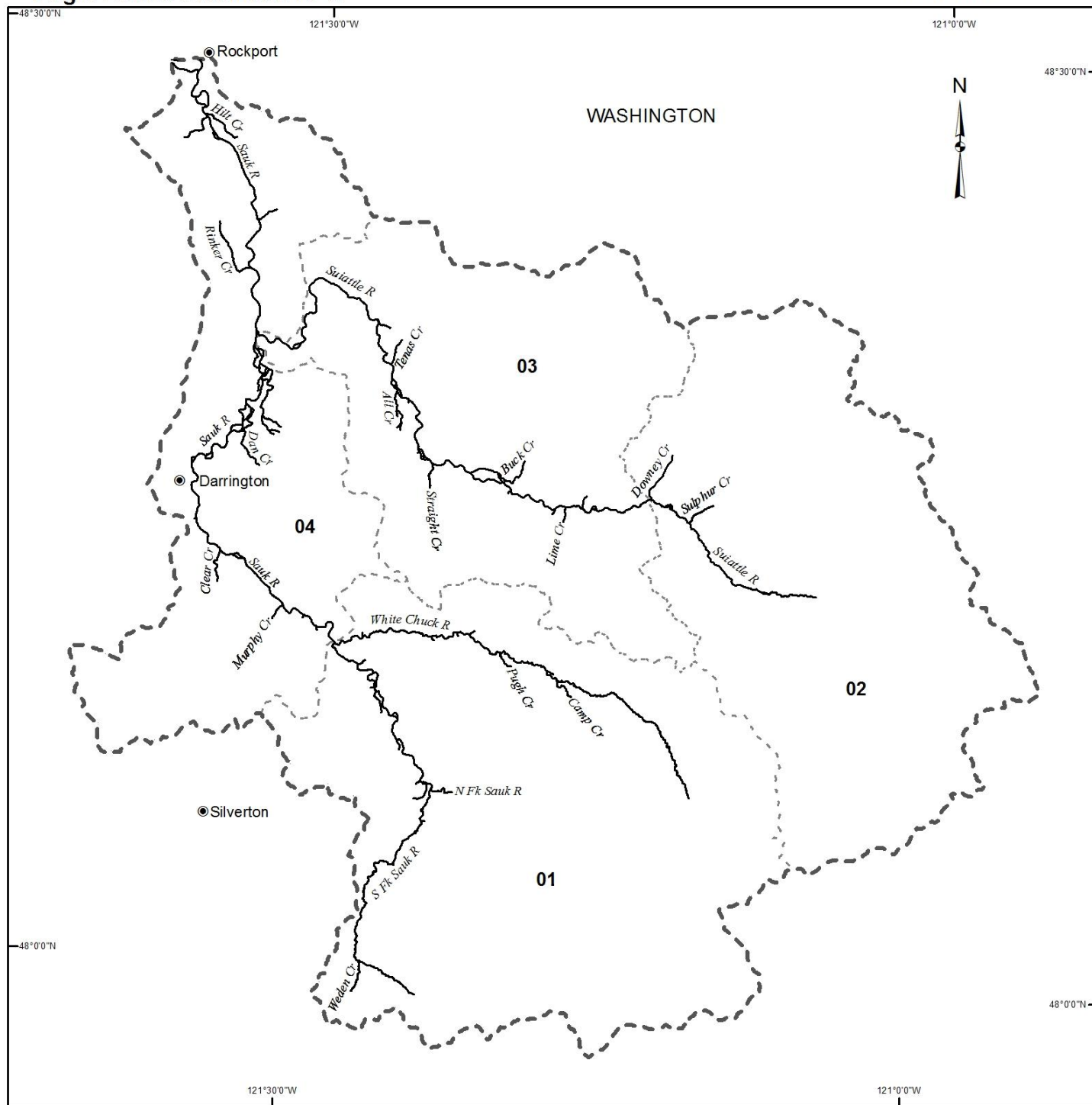
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Sauk Subbasin
17110006



● Cities

□ State Boundaries

— Critical Habitat

⋯ Watershed Boundary

- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110006, watershed = 1711000601)

0 3 6 12 Kilometers

0 2.5 5 10 Miles

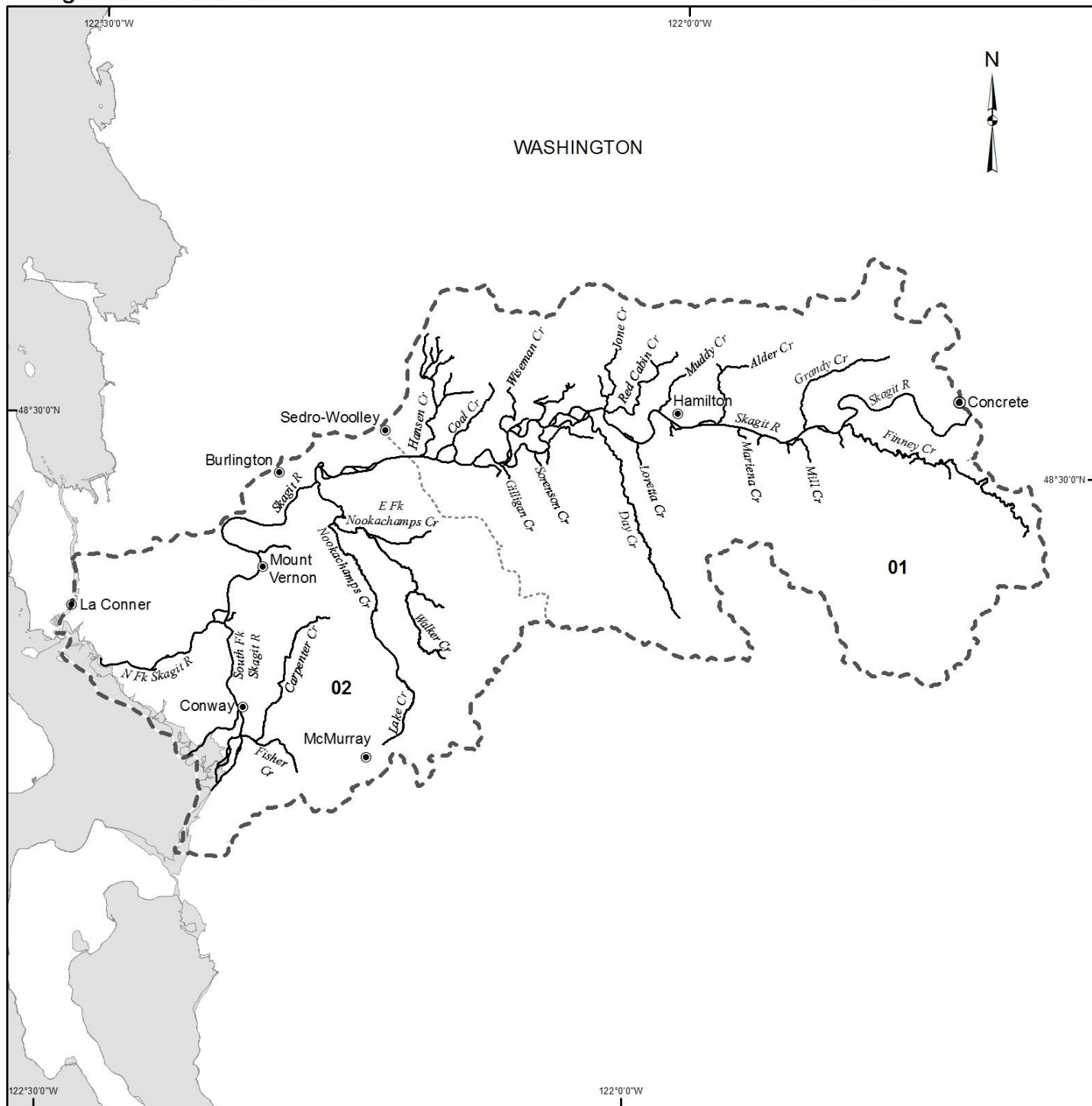
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Lower Skagit Subbasin
17110007



● Cities

□ State Boundaries

~ Critical Habitat

○ Watershed Boundary

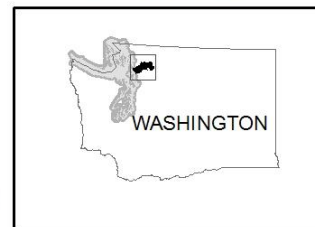
⊞ Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110007, watershed = 1711000701)

0 3.25 6.5 13
Kilometers

0 2.75 5.5 11
Miles

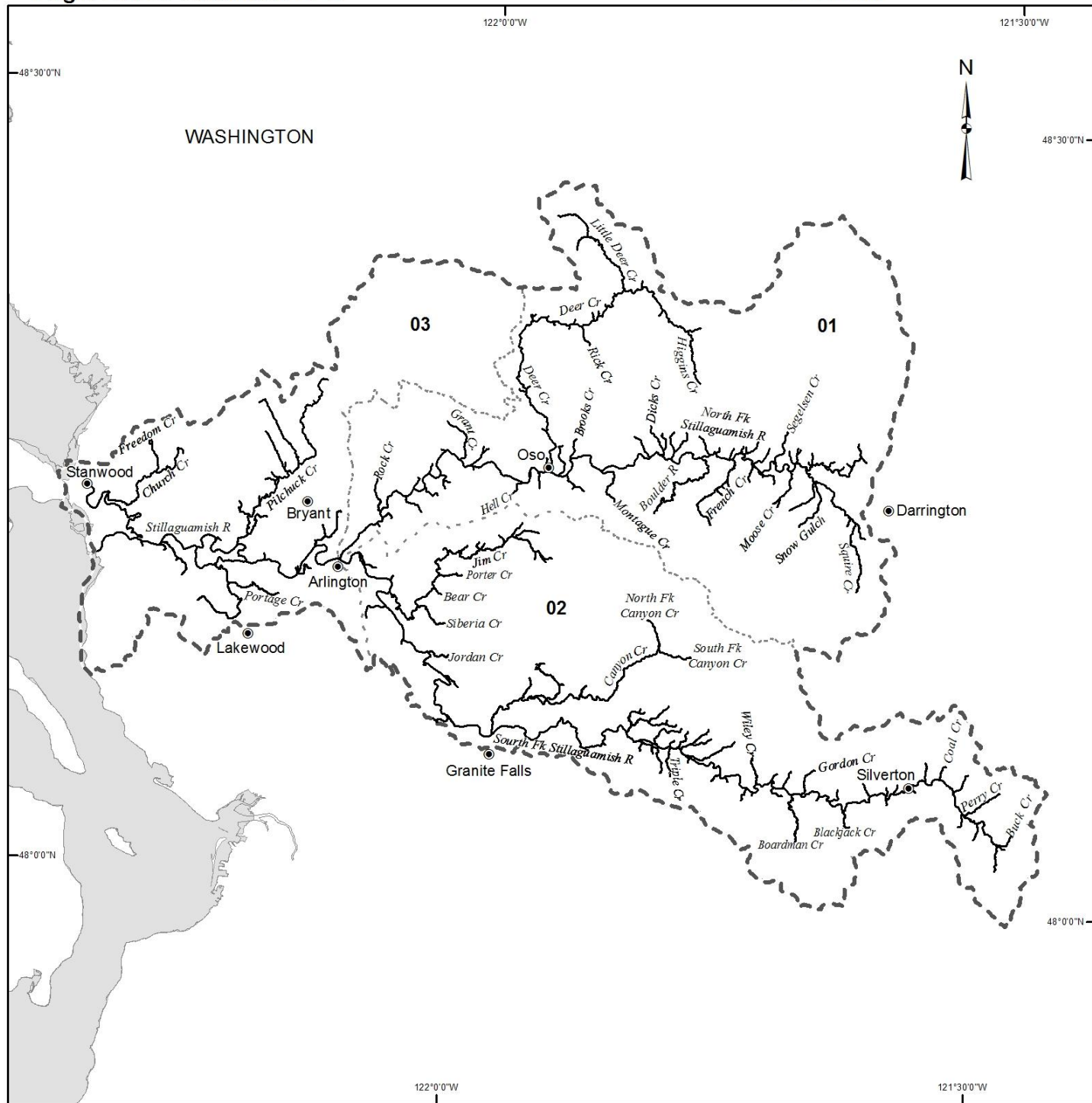
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

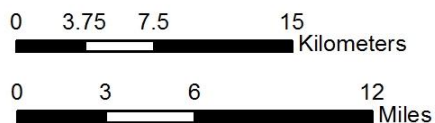
Final Critical Habitat for the Puget Sound Steelhead DPS

Stillaguamish Subbasin
17110008



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110008, watershed = 1711000801)



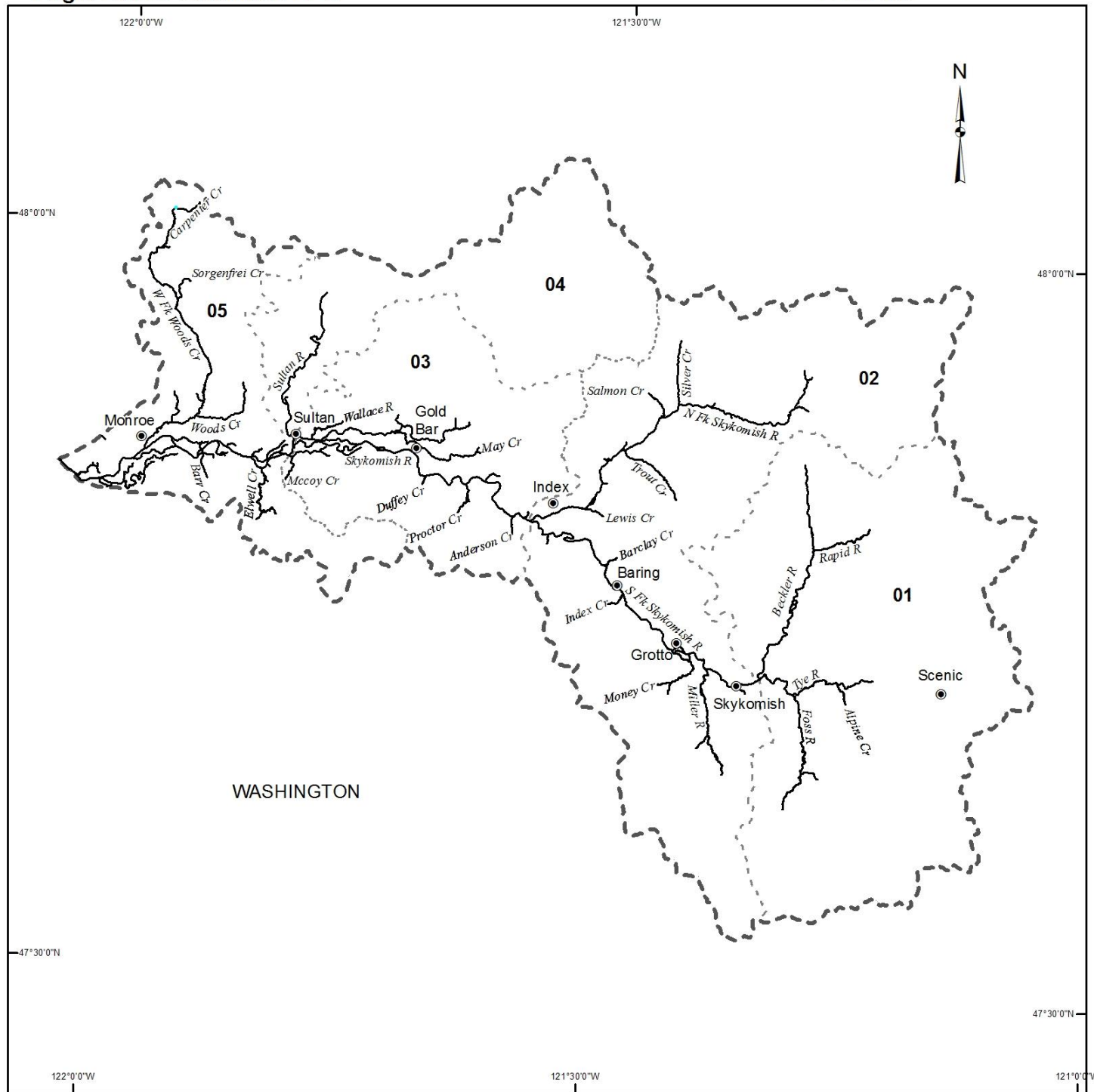
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Skykomish Subbasin
17110009



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110009, watershed = 1711000901)

0 4 8 16
Kilometers

0 3 6 12
Miles

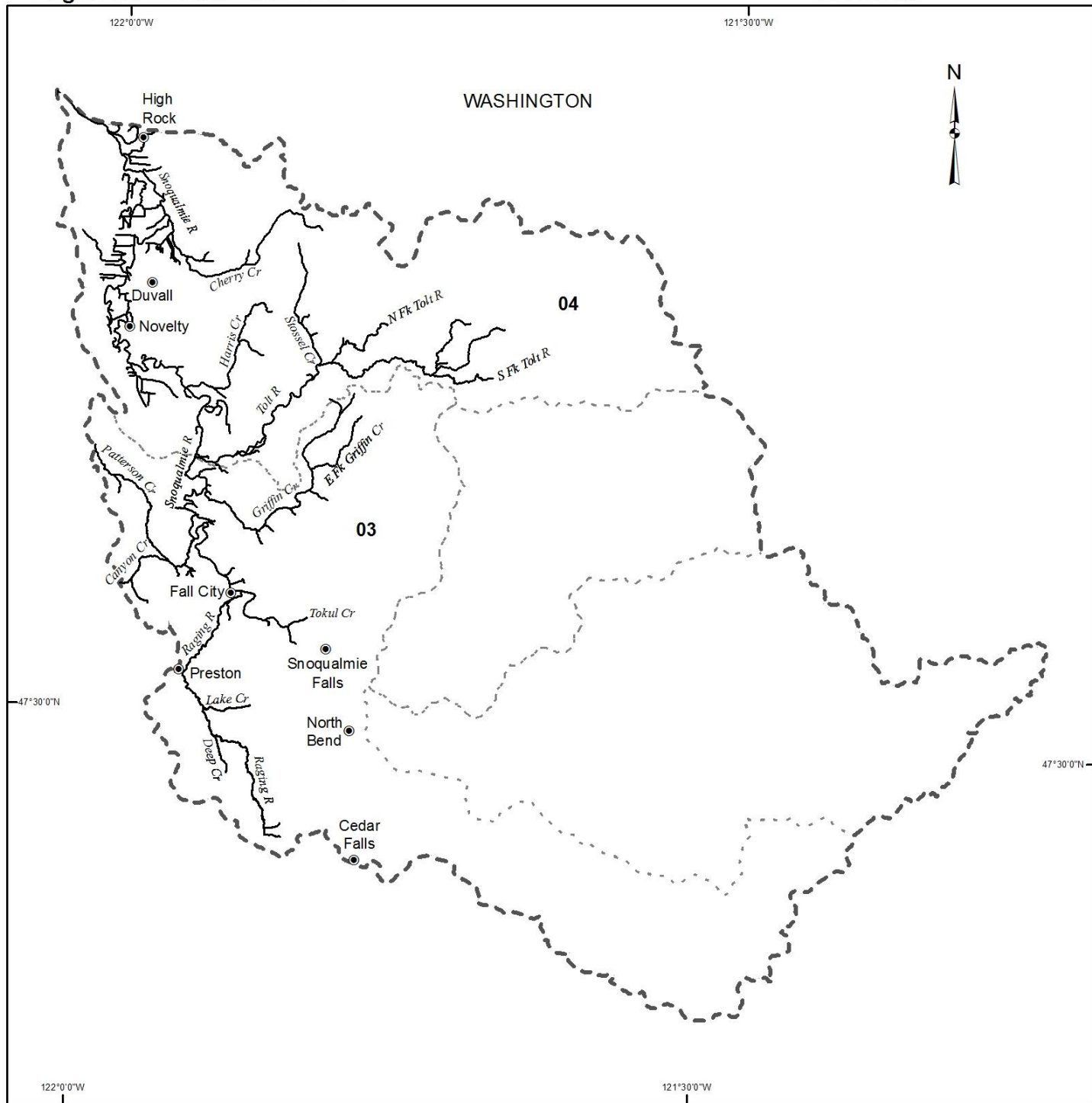
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Snoqualmie Subbasin
17110010



● Cities

□ State Boundaries

~ Critical Habitat

--- Watershed Boundary

- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110010, watershed = 1711001001)

0 3.25 6.5 13
Kilometers

0 2.5 5 10
Miles

Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Snohomish Subbasin
17110011



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110011, watershed = 1711001101)



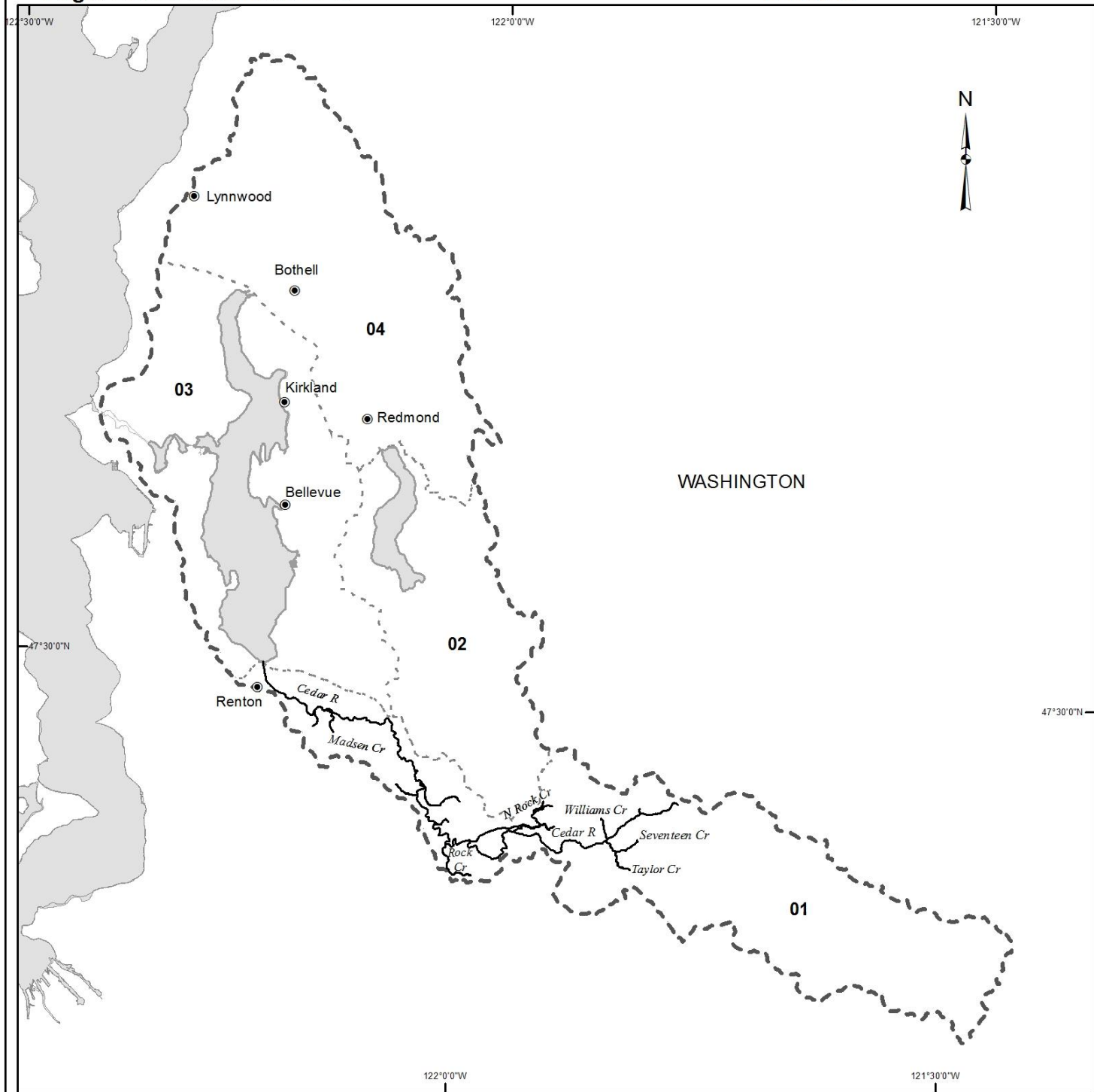
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Lake Washington Subbasin
17110012



- Cities
- State Boundaries
- Critical Habitat
- - - Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110012, watershed = 1711001201)



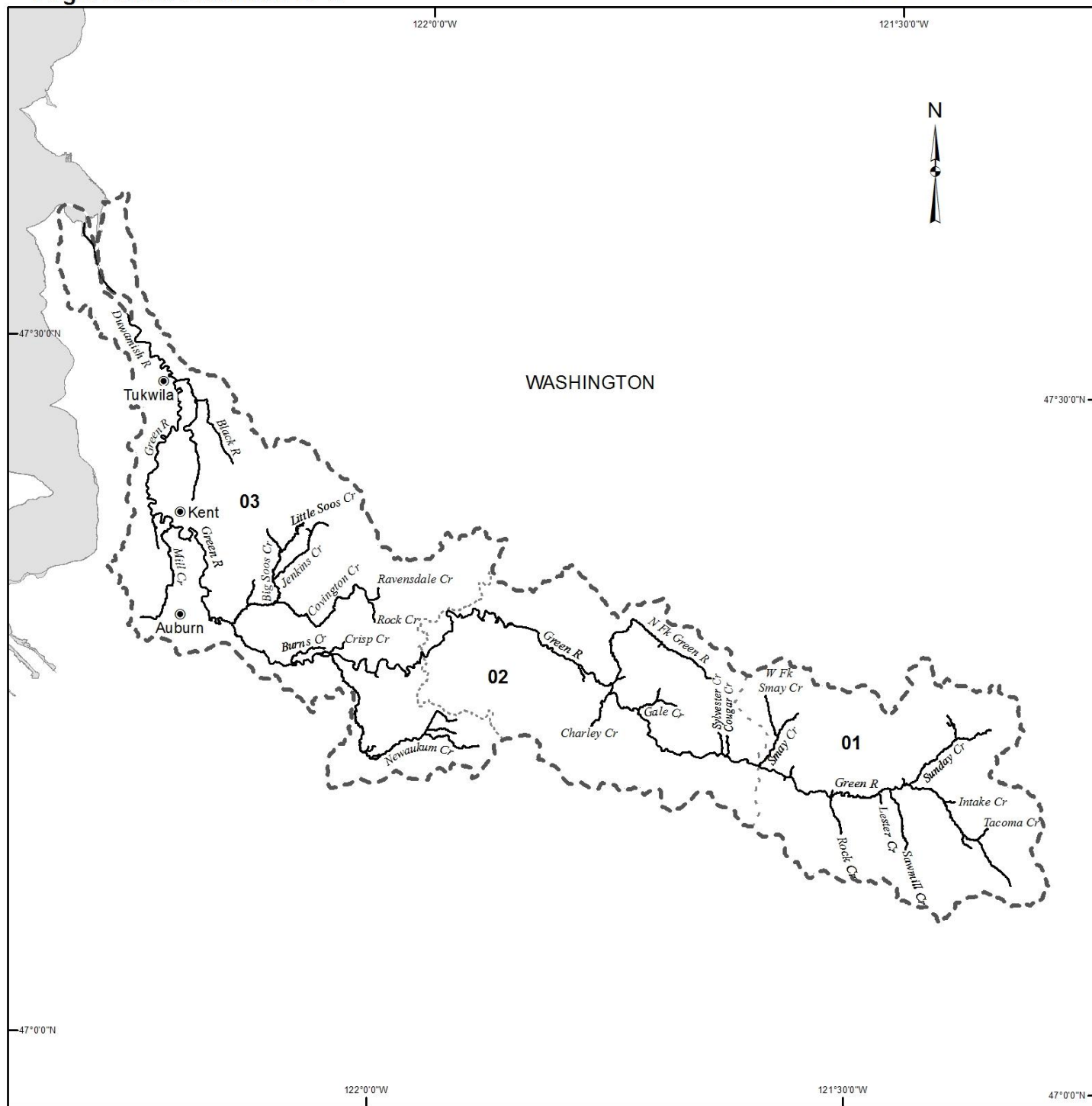
Area of Detail



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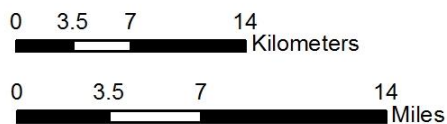
Final Critical Habitat for the Puget Sound Steelhead DPS

Duwamish Subbasin
17110013



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110013, watershed = 1711001301)



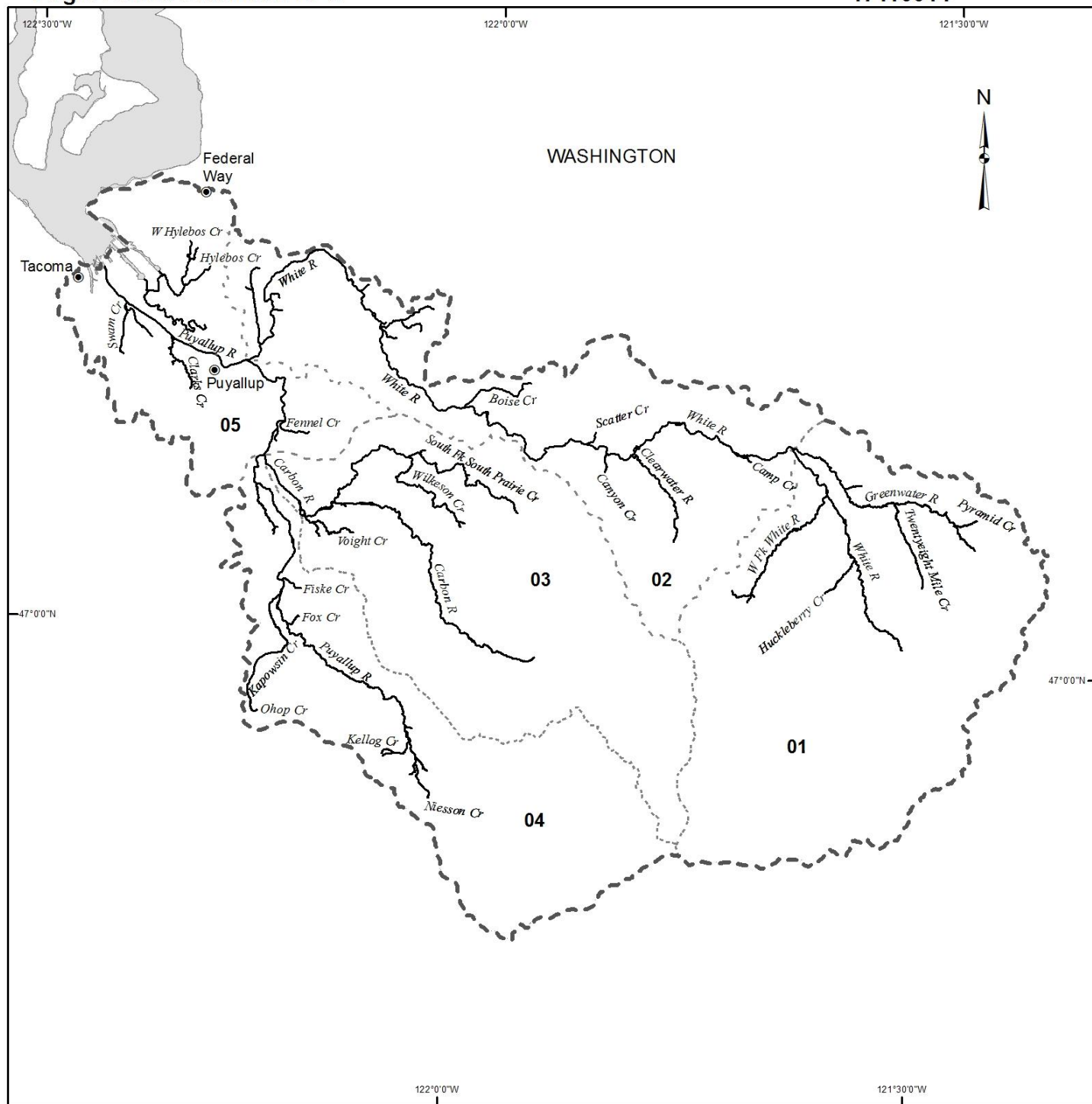
Area of Detail



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Final Critical Habitat for the Puget Sound Steelhead DPS

Puyallup Subbasin
17110014



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110014, watershed = 1711001401)



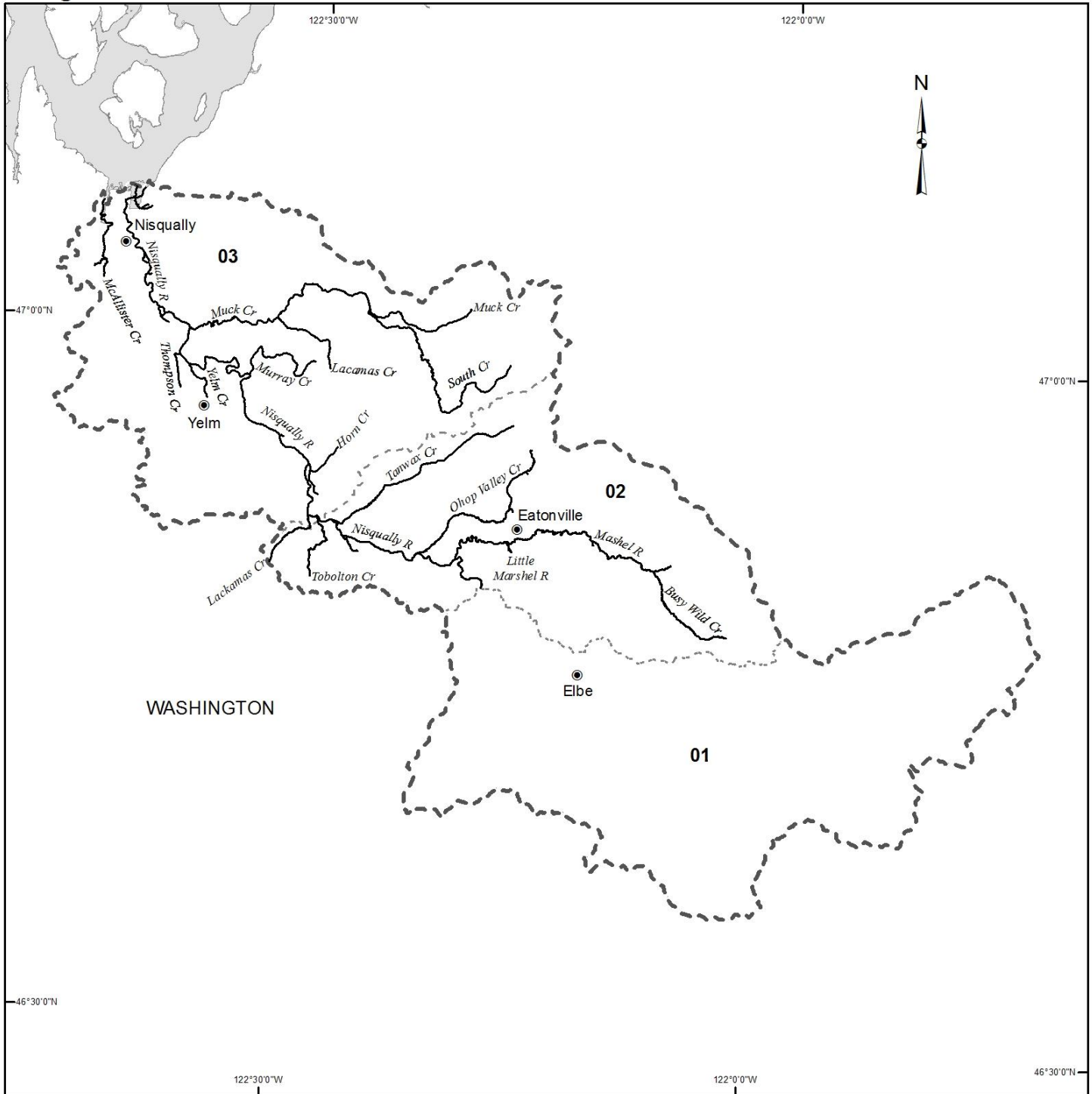
Area of Detail



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Final Critical Habitat for the Puget Sound Steelhead DPS

Nisqually Subbasin
17110015



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110015, watershed = 1711001501)



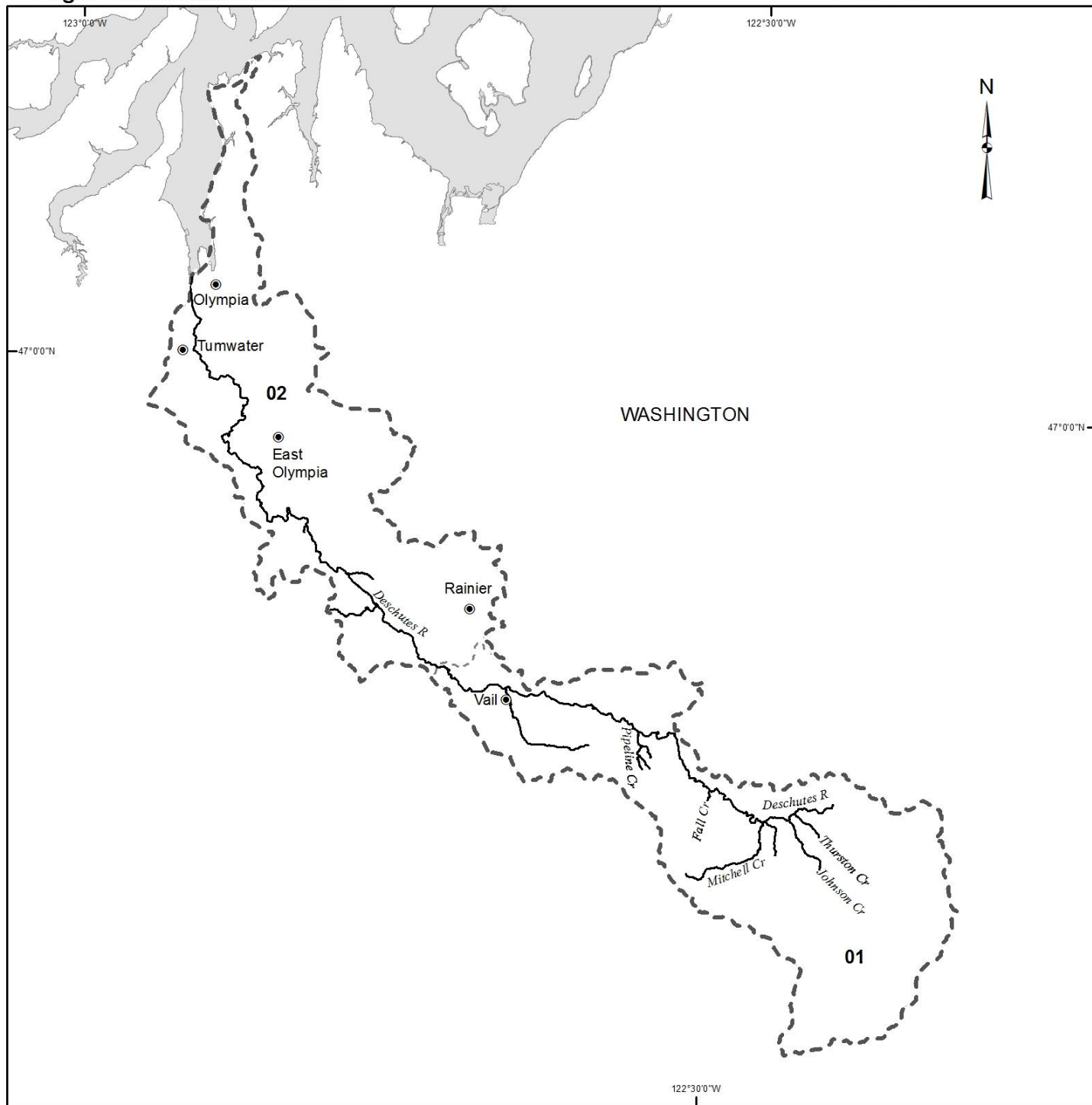
Area of Detail



This map does not show U.S. Department of Defense sites determined to be ineligible for designation nor excluded areas associated with Indian lands and Habitat Conservation Plans; see the regulatory text for a description of these excluded areas.

Final Critical Habitat for the Puget Sound Steelhead DPS

Deschutes Subbasin
17110016



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110016, watershed = 1711001601)

0 2.5 5 10
Kilometers

0 2.5 5 10
Miles

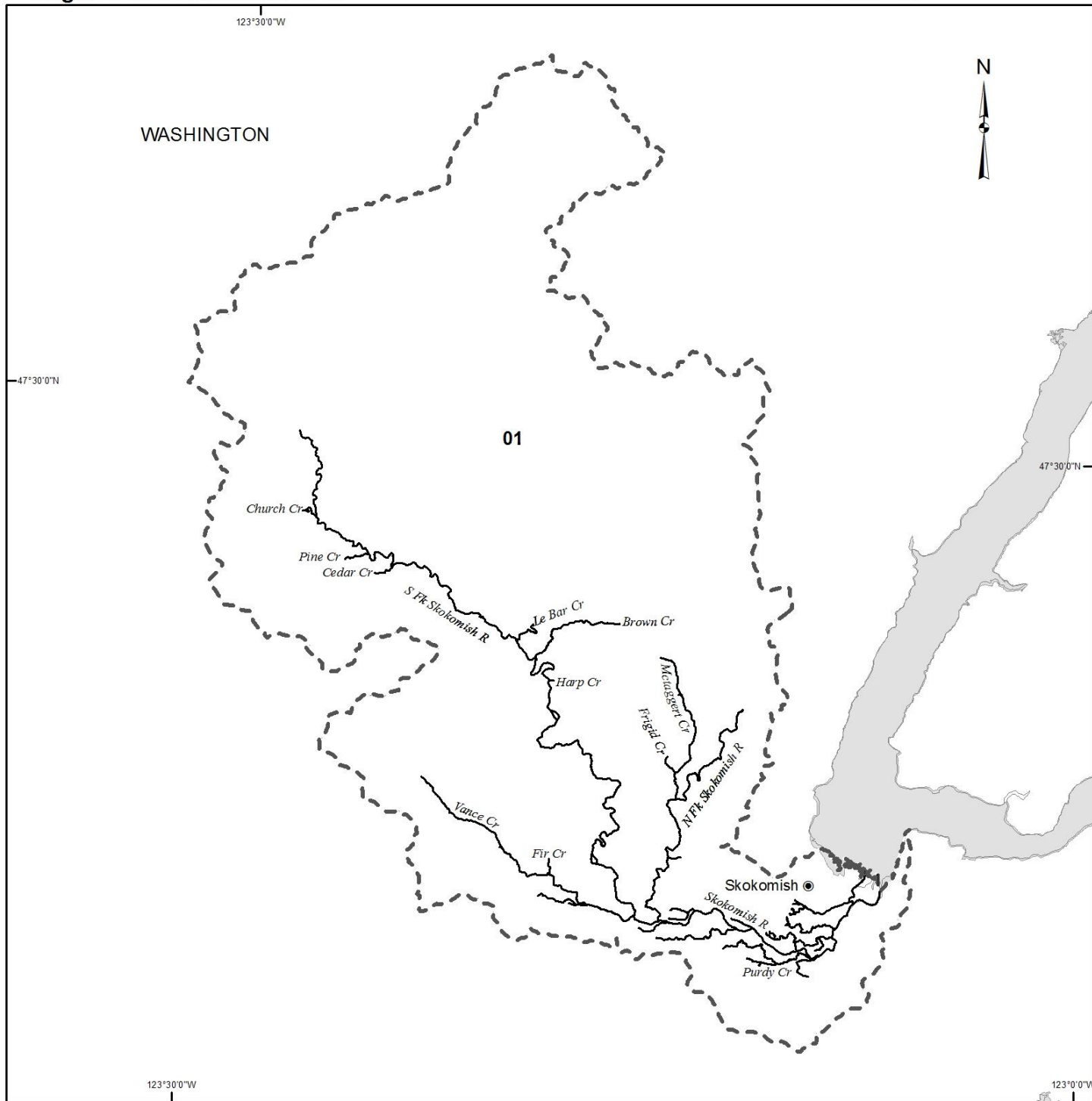
Area of Detail



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Final Critical Habitat for the Puget Sound Steelhead DPS

Skokomish Subbasin
17110017



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- ⊞ Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110017, watershed = 1711001701)



Area of Detail



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Final Critical Habitat for the Puget Sound Steelhead DPS

Hood Canal Subbasin
17110018



● Cities

□ State Boundaries

~ Critical Habitat

--- Watershed Boundary

- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110018, watershed = 1711001801)

0 3.5 7 14
Kilometers

0 2.75 5.5 11
Miles

Area of Detail



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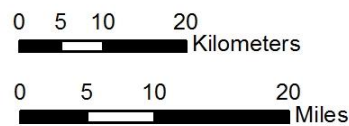
Final Critical Habitat for the Puget Sound Steelhead DPS

Puget Sound Subbasin
17110019



- Cities
- State Boundaries
- ~ Critical Habitat
- Watershed Boundary
- Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110019, watershed = 1711001901)



Area of Detail

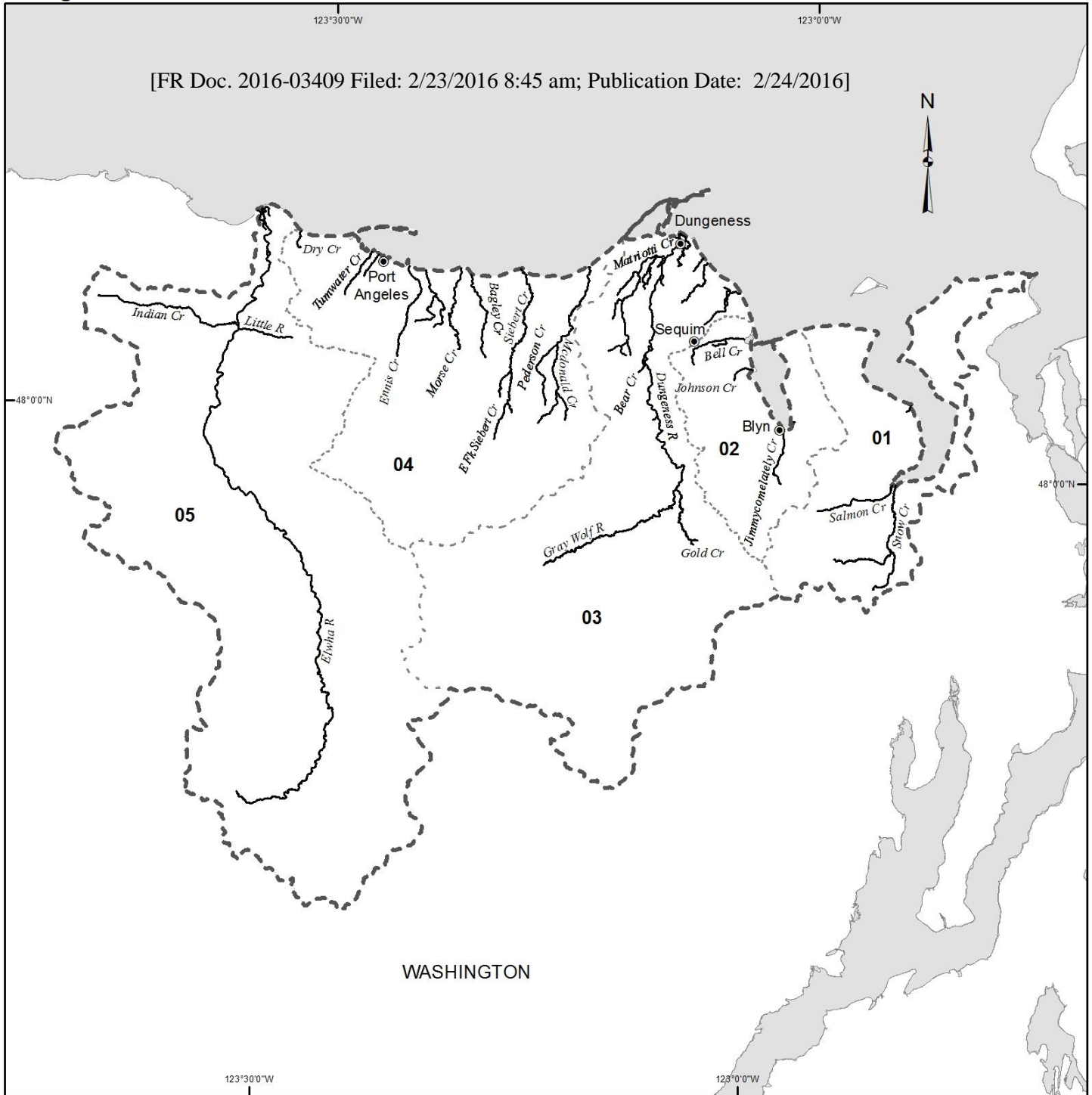


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Final Critical Habitat for the Puget Sound Steelhead DPS

Dungeness-Elwha Subbasin
17110020

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WASHINGTON

● Cities

□ State Boundaries

~ Critical Habitat

- - - Watershed Boundary

- - - Subbasin Boundary

The watershed code is the subbasin number with the two digit watershed code appended to the end (i.e., Subbasin = 17110020, watershed = 1711002001)

0 4 8 16
Kilometers

0 3.25 6.5 13
Miles

Area of Detail



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